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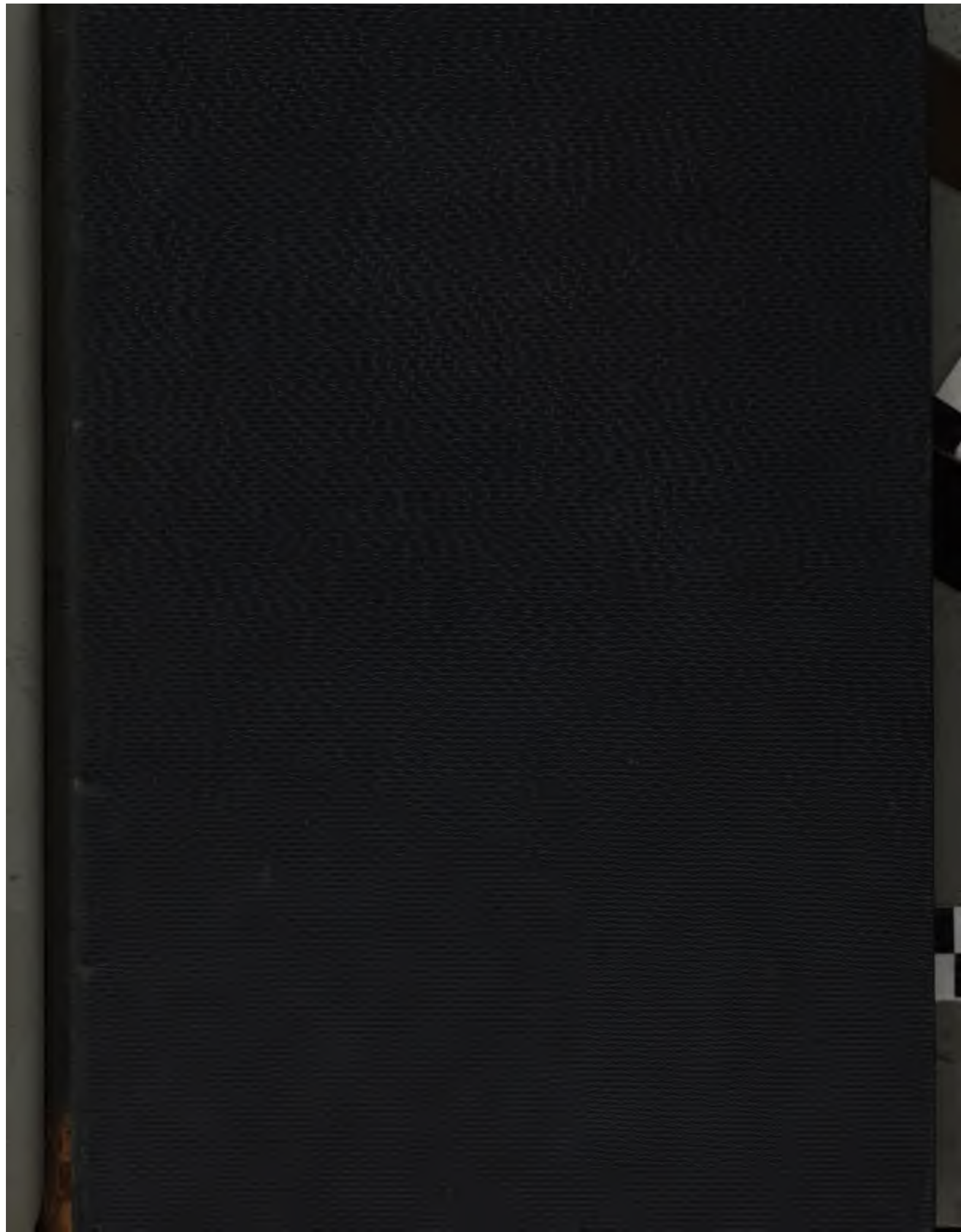
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15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.



ALPHABETICAL INDEX
OF
PATENTEES AND APPLICANTS FOR PATENTS OF
INVENTION

For the Year 1871. — *176.*

Printed and Published by Order of the Commissioners of Patents

UNDER THE

ACT of 15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.

BY BENNET WOODCROFT, F.R.S.,

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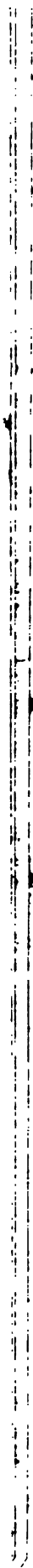
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ALPHABETICAL INDEX

OF

PATENTEES AND APPLICANTS FOR PATENTS OF INVENTION

For the Year 1871.

[The names printed in *Italic* are those of the persons by whom the inventions have been communicated to the Applicants for Letters Patent. The figures following the names are the consecutive numbers of the Applications.]

[Abb-Ada]

[Ada-All]

A.

Abbey, F. J., & Foster, J. H. (Green), 929, Apr. 8, [Fire-arms.
 — *F. J., & Foster, J. H.* (Green), 2522, Sep. 23, [Fire-arms.
Abbott, T., 2957, Nov. 3, Sizing yarn.
 — *W., & Cole, J.*, 2975, Nov. 4, Treating sewage, &c.
Abel, C. D. (*Kraut*), 873, Apr. 1, Glycerine.
 — *C. D.* (*Henderson*), 1331, May 17, Cotton gins.
 — *C. D.* (*Chevillon*), 1894, July 20, Ventilating hats.
 — *C. D.* (*Rousseau & Rousseau*), 2229, Aug. 25, [Steam-engines.
 — *C. D.* (*De Usera & Goujet*), 2258, Aug. 28, [Furnace grates.
 — *C. D.* (*Grisson*), 2259, Aug. 28, Dyeing woollen [waste.
 — *C. D.* (*Allart*), 2292, Aug. 31, Dyeing wool, &c.
 — *C. D.* (*Grisson*), 2362, Sep. 7, Printing on cloth.
 — *C. D.* (*Aubert*), 2416, Sep. 14, Screw-propellers.
 — *C. D.* (*Durfee*), 2740, Oct. 16, Iron & steel; [metal alloys.
 — *C. D.* (*Allart*), 2746, Oct. 17, Dyeing wool, &c.
 — *C. D.* (*Heald, Morris & Sisco*), 3189, Nov. 24, [Pumps.
 — *C. D.* (*Rycx*), 3452, Dec. 20, Admitting steam to [cylinders, &c.
Abraham, D. (*Abraham*), 1911, July 21, Separating [molasses.
Abraham, P. (*Abraham*), 1911, July 21, Separating [molasses.
Abrahams, J., 2915, Oct. 31, Ventilating wearing apparel.
Ackermann, Meissner & Co. (*Funck*), 237, Jan. 30, [Vessels for oils, &c.
Ackroyd, R., & Whitehead, H. W., 213, Jan. 26, [Combing fibres.
Adam, J. L., 1540, June 10, Ink-stands.
Adams, H. W. (*Hunt*), 1659, June 24, Steam-engine (cylinders, &c.
Adams, John, 2198, Aug. 21, Steam boilers, furnaces, &c.
Adams, John P., & Goddard, K. (*Bousfield*), 2064, [Aug. 4, Refrigerative vessels, &c.
Adams, Josiah, 732, Mar. 18, Crimping, goffering, or [fluting.
 — *T.*, 267, Feb. 1, Envelopes or wrappers.
 — *W. M., & Taylor, F. B.*, 355, Feb. 11, Propell- [ing, &c. ships.
Adamson, D., 344, Feb. 9, Steam-boilers.

Adamson, W. (*Johnson*), 1853, July 15, Treating wood, [&c. for paper stock.
 — *W.* (*Johnson*), 2168, Aug. 17, Treating [fibres, &c.
Adamson, W. B., and Munro, A., 2034, Aug. 2, Cutting [stone, &c.
Addie, J., 628, Mar. 9, Iron, & furnaces therefor.
Adie, P., 60, Jan. 10, Lamps.
 — *P.*, 3397, Dec. 15, Oil lanterns.
Adshead, W., & Underwood, N. C., 2561, Sep. 28, Felt- [ing hat bodies, &c.
Adutt, L. M., & Joannides, J. M., 2683, Oct. 10, Venti- [lating, &c., packed goods.
Agerup, P. (*Matthiesen, Castenshiold & Brasen*), 736, [Mar. 18, Steam vessels.
Agnellet, J. M., 1499, June 6, Burning liquid fuel.
Ahrens, W. (*Dann*), 2237, Aug. 25, Pearl-hardening, [white of baryta, &c.
Ainsley, G., 2569, Sep. 29, Velocipedes.
Ainsworth, E., Wright, W. C., & Pendlebury, R., 3034, [Nov. 10, Bleaching.
Aitken, H., & McAlley, R., 1337, May 18, Alum, &c.
 — *J.*, 1529, June 9, Lubricating sized yarn.
 — *R.*, 1886, July 19, Breakwaters and piers.
Akin, C., 515, Feb. 25, "Post cards" or tablets.
Akins, W. H. (*Lawrence*), 240, Jan. 30, Padlocks.
Albrecht, A. (*Johnson*), 968, Apr. 12, Clothes wringers.
Alcorn, W. A., 2227, Aug. 25, Protecting bottles, &c.
 — *W. A.*, 3501, Dec. 28, Wood envelope for [bottles, &c.
Aldebert, L., 2492, Sep. 21, Carriages.
Aldridge, F. T., 959, Apr. 12, Hat-bodies.
 — *F. T.*, 2665, Oct. 9, Hat-bodies.
Alexander, J., 3438, Dec. 19, Cutting or getting coal, &c.
 — *T.*, 2916, Oct. 31, Lubricating bearings, &c.
Alexander, T. H., Clarke, R. & F. G. (*Lake*), 2936, [Nov. 1, Ferrules.
Alison, J., 2900, Oct. 28, Steam-engine condensers.
Allan, G., & Gregory, J., 2693, Oct. 11, Railway chairs & [sleepers, &c.
 — *J. F.*, 113, Jan. 16, Gas.
 — *J. F., & Moffat, J.*, 1555, June 12, Gas-holders.
Allanson, W., & Pearson, J., 2078, Aug. 7, Chain fasten- [ings, &c.
Allart, L. (*Abel*), 2292, Aug. 31, Dyeing wool, &c.
 — *L.* (*Abel*), 2746, Oct. 17, Dyeing wool, &c.
Allen, A. F. (*Haseltine*), 125, Jan. 18, Shot-pouches.
Allen, C., 255, Jan. 31, Roadways for rivers.
Allen, C. H. & F. A. (*Newton*), 1252, May 9, Weighing.
 — *F. A. & C. H.* (*Newton*), 1252, May 9, Weighing.
Allen, J. F., 85, Jan. 12, Generating steam.
 — *J. M.*, 3202, Nov. 27, Coating or enamelling surfaces.

- Allen, J. P., 1543, June 10, Engine speed indicators.
 Allen, R. N., Kimball, L. W., Mallory, W. H. & Butterfield, E. L. (Newton), 1370, May 22, Railway wheels.
 Allen, S. B. (Huntoon), 352, Feb. 10, Engine governors.
 — S. B. (Huntoon), 1255, May 9, Steam governors.
 Alley, S., 2859, Oct. 25, Wheels.
 Allibon, G., & Walsh, W., 693, Mar. 15, Telegraph poles & posts.
 Allin, E. W., 227, Jan. 28, Composition for covering paper.
 Almqvist, A. (Sterne), 2714, Oct. 13, Fluid-meters.
 Alsip, F. (Newton), 2026, Aug. 1, Handles of shovels, &c.
 Amann, J. (Hunt), 3158, Nov. 22, Automatic pianos, &c.
 Amies, W. S., 3409, Dec. 16, Artificial manures.
 Amos, J., 2179, Aug. 18, Ventilating cooking ranges.
 — J., 2245, Aug. 26, Ventilation.
 Anders, G. L. & Welch, E. B. (Hunt), 2435, Sep. 15, [Electric telegraphs.
 Anderson, A., 1242, May 8, Steam-engine valves.
 — C., 24, Jan. 5, Transporting canal & other boats.
 — J., 718, Mar. 17, Obtaining iron.
 — J., 2134, Aug. 14, Reducing oxides; obtaining iron, &c.
 — J., 2216, Aug. 23, Reducing oxides; obtaining iron, &c.
 — J., 2326, Sep. 4, Motive-power.
 — J., 3493, Dec. 27, Reducing oxides; obtaining iron, &c.
 — Walter, 3208, Nov. 28, Sewing-machine needles.
 — William, 2862, Oct. 25, Treating hides & skins.
 — William, 3455, Dec. 21, Rendering sewage [gases innocuous.
 — William, 3456, Dec. 21, Treating hides & skins.
 — William L., 1393, May 24, Working, &c. guns.
 André, L. V., 2366, Sep. 7, Sewing machine shuttles.
 André, O., & Fleury, J. S. (Touaillon), 3199, Nov. 25, [Cast iron bars.
 Andrew, H., 1806, May 15, Stand for holding, &c., bath [gloves.
 Andrews, A. C., 2130, Aug. 12, Sewn boots and shoes.
 — C., 1891, July 19, Drawing off liquors from [casks.
 Andrews, E. W., & Field, G. B. (Lake), 1400, May 24, [Telegraphs.
 Andrews, G. H., & Gibbs, W., 2525, Sept. 25, Treating [fibrous plants.
 — H., & Watson, G., 2223, Aug. 24, Safety-valves.
 Angell, B. J., 2878, Oct. 26, Treating sea-weed.
 — G., 390, Feb. 15, Propelling & steering vessels.
 Annandale, A., 279, Feb. 2, Reducing wood, &c., to pulp.
 — A., 605, Mar. 7, Paper-pulp.
 — A., 664, Mar. 13, Reducing wood, &c., to [pulp.
 — A., 3183, Nov. 24, Treating waste acids & [alkalies.
 Ansell, W., 825, Mar. 28, Fire-arms.
 — W., 1174, May 2, Fire-arms.
 Apperly, J., 2549, Sep. 27, Stamp receptacle & indicator.
 Appleby, C. J., 1072, Apr. 22, Boring, tunnelling, [mining, &c.
 — C. J., Campbell, B., & Leplay, J. 2, Jan. 2, [Extracting saccharine matters.
 Appleton, C. J. (Brewer), 1945, July 24, Knitting [machinery.
 Aramburu, F., (Reinlein), 84, Jan. 12, Cartridge-pouches.
 Archer, T., & Hall, C. E., 3046, Nov. 11, Traction-engines.
 — W., 107, Jan. 14, Two-wheeled carriages.
 Arden, H. (Clark), 1165, May 1, Discharging ordnance.
 — H. (Clark), 2380, Sep. 8, Discharging ordnance.
 Argy, E. A. G. D' (Clark), 1727, July 3, Coffee-pots.
 — E. A. G. D' (Clark), 3109, Nov. 16, Wire gauze.
 Armbruster, J. H., & Taft, G. C. (Johnson), 533, Feb. 28, [Sand-paper, &c.
 Armistead, H., & Tunstill, T. & R., 2021, Aug. 1, [Buffer for easing shuttle, &c., in looms.
 — H., Tunstill, T., & Bannister, T., 439, Feb. 18, [Looms.
 Armitage, E., Haley, J., & Roberts, L., 2917, Oct. 31, [Consuming smoke.
 Armour, A. (Lamm), 517, Feb. 25, Ammoniacal gas- [engine.
 Armstrong, C., 3332, Dec. 9, Hats.
 Armstrong, F. (Lake), 821, Mar. 27, Garters.
 Armstrong, F. A. (Heurne), 2023, Aug. 1, Game-boards [for chess, &c.
 — H. P., 2559, Sep. 28, Teaching to play musical [instruments.
 Arnold, A., 523, Feb. 27, Making or forming wire.
 — A., & Barraclough, C., 3012, Nov. 8, Covering [wire.
 Aronson, J. N. (Newton), 1131, Apr. 28, Street lamps, &c.
 Ascough, J., 3478, Dec. 22, Candles.
 Ash, H. C., 1223, May 5, Railway meat vans.
 Ashcroft, W., 2291, Aug. 31, Cardboard.
 — W., 3512, Dec. 29, Cardboard.
 Asher, J. W., & Paget, F. A., 511, Feb. 25, Ice-making.
 — J. W., & Paget, F. A., 2228, Aug. 25, Abstracting [heat.
 Ashford, C., 2771, Oct. 18, Iron gratings.
 Ashton, H., 1063, Apr. 22, Steam boilers.
 Ashworth, H., 3445, Dec. 20, Shuttles.
 — J. & R., & Knowles, S., 927, Apr. 8, Printed [fabrics.
 — R. & J., & Knowles, S., 927, Apr. 8, Printed [fabrics.
 Asquith, S. E., & Greenwood, F. A., 947, Apr. 10, Spin- [ning.
 Assmann, A. (Newton), 867, Mar. 31, Washing machines.
 Astley, P. H., 2242, Aug. 26, Floating vessels.
 Aston, J., 1866, July 17, Fire-arms.
 Atkey, A. J., 259, Jan. 31, Ore stamping machinery.
 — A. J., & Donald, A., 1302, May 15, Pulverising [steam-hammers.
 Atkin, R., 2897, Oct. 28, Ships, &c.
 Atkins, T., 934, Apr. 8, Boilers and furnaces.
 Atkinson, H., Michael, J. J., Knight, T. W., & Colls, [F. W., 1650, June 23, Paper-pulp.
 — J. (Prentiss), 2352, Sep. 6, Telegraph poles.
 — M., Davy, T., & Turnpenny, W., 2996, Nov. 7, [Looms.
 — T., 481, Feb. 23, Steam cultivators.
 — T., 3195, Nov. 25, Treating diseased cattle.
 — W., 3331, Dec. 9, Open stoves.
 Atlee, G. J. & T. W., 936, Apr. 8, Taps for casks.
 — T. W. & G. J., 936, Apr. 8, Taps for casks.
 Aubert, A. (Abel), 2416, Sep. 14, Screw propellers.
 Aubertin, E. (Clark), 1181, May 3, Oxidising matters.
 Aubertin, N. A., & Ellis, G. H., 1213, May 5, Printing, [copying, &c.
 Austin, E. R., 999, Apr. 15, Erecting, and sinking cylin- [ders for piers, &c.
 — W., & Ellis, H. D., 3219, Nov. 28, Paving blocks.
 Aveling, T., 509, Feb. 25, Steam road rollers.
 Avery, J. G. (Lake), 2284, Aug. 30, Spinning wool.
 Avery, W., 101, Jan. 14, Cases for needles, matches, &c.
 — W., 1322, May 16, Cases for needles, matches, &c.
 — W., 2099, Aug. 9, Needle-cases.
 Ayres, J. W., & Pugin, E. W., 1408, May 25, Doorfastener.
 Ayshford, T. B., 1384, May 23, Dog carts, &c.

B.

Babbitt, B. T. (Newton), 2345, Sep. 5, Propelling vessels.
Babcock, G. H. (Towle), 1418, May 27, Steam-engines.
Baccellieri, A., & *Guattari, A.*, 2281, Aug. 30, Gloves.
Bachhoffner, G. H., 1809, July, 11, Lamps.
Bacon, E. (Bacon), 1272, May 11, Washing and cleansing [fabrics].

Bacon, G. W. (Bacon), 1272, May 11, Washing and [cleansing fabrics].

Badham, B. C., 414, Feb. 17, Skates.
Baggs, L., 1806, July, 11, Refrigerating ice safes.
Bagshaw, B., 973, Apr. 12, Railway signals.
Bailey, L., & *Hoyle, C.*, 2309, Sep. 1, Washing fibres.
 — *James, & Briggs, J.*, 568, Mar. 3, Aërated waters.
 — *John*, 2528, Sep. 25, Joint for screw piles.
 — *T.*, 1789, July 8, Breech-loading small arms.
 — *W. (Hickman)*, 655, Mar. 11, Hernia truss.
 — *W. H.*, 938, Apr. 10, Combing fibres.

Bainbridge, C. T. & *Yorkston, R. P.* (Cropper) 675, [Mar. 14, Printing].

Baines, E. & *Barber, C. & W.*, 2377, Sep. 8, Card-setting [machines].

— *W.*, 779, Mar. 22, Working, &c., signals and [switches].

— *W. V.*, 1166, May 2, Window glass.

Baker, B. C. (Lake), 1501, June 6, Journal boxes and [bearings].

— *F. (Clark)*, 1846, July 14, Treating cancer, &c.

Baker, F. R., 3133, Nov. 20, Pens.

— *J.*, 1317, May 16, Fasteners for sashes, doors, [boxes, &c].

— *J.*, 1754, July 5, Waterclosets.

— *T.*, 1707, June 30, Umbrellas and parasols.

— *T. P. (Bell & Gisborne)*, 1218, May 5, Drills.

Balch, A. H., & *Nelson, W. D. E.* (Haseltine), 477, [Feb. 23, Separating magnetic iron].

Baldwin, A. (Lake), 2406, Sep. 12, Compressing cotton, [hay, &c].

Baldwin, B., & *Dodgeon, J.*, 2307, Sep. 1, Looms.

— *H.*, 2327, Sep. 4, Preventing incrustation; [lubricant].

Ball, A., 3305, Dec. 7, Invalid beds and couches.

— *C. J.*, 445, Feb. 21, Raising, lowering, &c. rock drills.

— *F.*, 1194, May 3, Sorting coins.

— *J.*, 2646, Oct. 5, Reaping hooks and sickles.

— *T.*, 2609, Oct. 3, Treating ammoniacal liquors, &c.

Balmain, W. H., 1299, May 13, Soda and its salts.

— *W. H. (Menzies)*, 783, Mar. 22, Grinding sub- [stances; mixing liquids, &c].

Balme, A., & *Crossley, A. B.*, 424, Feb. 17, Punching, &c. [plates].

— *A.*, & *Crossley, A. B.*, 2139, Aug. 15, Punching, &c. [plates].

Balehaw, W., & *Craik, J.*, 1253, May 9, Looms.

Baly, C. (Parish), 351, Feb. 10, Manure.

Bang, I., *Provost, L. L. H.*, & *Blanchard, L. H.* (Clark), [2983, Nov. 6, Phosphate of ammonia].

Banks, J., & *Walker, W.*, 2495, Sep. 22, Treating sewage; [filtering water, &c].

Bannehr, J., & *Matthews, H.*, 556, Mar. 2, Gas and fuel.

Bannister, T., *Armistead, H.*, & *Tunstill, T.*, 439, Feb. 18, [Looms].

Baizolas et Cie (Johnson), 3259, Dec. 1, Extinguishing [fires].

Baquet, B., & *Feraud, E.* (Clark), 2451, Sep. 16, Cocks [or valves].

Barnowski, J. J., & *Skwarcow, J.*, 3021, Nov. 9, Capsules.

Barbarin, A., & *Dupas, A. E.* (Haseltine), 452, Feb. 21, [Carburetted air].

— *A.*, & *Dupas, A. E.* (Haseltine), 472, Feb. 22, [Carburetted air].

Barbe, J., & *Vansteenkiste, A.*, 1401, May 24, Steam- [boilers].

Barber, C. & W., & *Baines, E.*, 2377, Sep. 8, Card-setting [machines].

— *J. I. (Forbes)*, 1212, May 5, Bending metals.

— *W. & C.*, & *Baines, E.*, 2377, Sep. 8, Card-setting [machines].

Barberot, E. (Clark), 1867, July 17, Penholders.

Barclay, A., 404, Feb. 16, Blast-furnaces.

— *A.*, 673, Mar. 14, Coking coal; making gas.

— *A.*, 2076, Aug. 5, Coking coal; making gas.

Barford, F., 1560, June 13, Straw-plait hats, bonnets, &c.

Barjon, V., & *Prevost, E.* (Lake), 2219, Aug. 24, Gal- [vanic batteries].

Barker, G., & *McFarlane, J.*, 1567, June 14, Railway rails.

Barker, J. (Lake), 2092, Aug. 8, Sand-papering machines.

Barker, J., & *Bean, R.*, 114, Jan. 16, Furnace bars.

— *R.*, 1434, May 30, Cleaning cotton.

Barlow, W. H., 2401, Sep. 12, Pumps; water meters; [motive-power].

Barnaby, S. S. (Norris), 1526, June 9, Casket for ex- [hibiting cards, &c].

Barnes, E., 3019, Nov. 9, Gas furnaces.

— *P.*, 704, Mar. 16, Coupling for hose pipes, &c.

Barnett, D. R., 2368, Sep. 7, Loom shuttles.

Barns, W. H., 2986, Nov. 6, Discharging liquids, &c., [from vessels].

Barnsley, E. W. & T., 3003, Nov. 7, Gutters, &c., for [buildings].

— *T. & E. W.*, 3003, Nov. 7, Gutters, &c., for [buildings].

Barr, J. (Young), 2220, Aug. 24, Propelling ships.

Barracough, A., 495, Feb. 24, Dewing, stiffening, &c., [fabrics].

— *C.*, & *Arnold, A.*, 3012, Nov. 8, Covering wire.

— *E.*, & *Bright, F. J.*, 1294, May 13, Looms.

Barran, J. & J., 377, Feb. 15, Pressing and finishing [garments].

Barrett, — (Lake), 2240, Aug. 25, Couch for applying [clysters].

Barrett, A., 3378, Dec. 13, Croquet-stands, &c.

— *H.*, & *Elers, C. G.*, 3484, Dec. 23, Bottle-stoppers.

— *R.*, & *Wright, S.*, 1562, June 13, Hand-stampers.

— *R.*, & *Wright, S.*, 3374, Dec. 13, Hand-stampers.

Barrie, J., 2804, Oct. 20, Supplying water to closets.

Bartholomew, E. G., 1238, May 8, Electric signals.

Bartlett, J. W. (Lake), 1432, May 29, Lamps.

— *J. W.* (Lake), 3217, Nov. 28, Lamps or lanterns.

— *M.* (Lake), 1796, July 8, Steam-boilers.

Barton, A., 378, Feb. 15, Recording telegraph.

Bash, G., & *Brode, L. A.*, 1786, July 7, Bobbins.

Basquit, H., 326, Feb. 8, Military drums.

Bass, J. H., 3150, Nov. 21, Vessels for making coffee, &c.

Basset, C. F. A. (Browne), 2640, Oct. 5, Pistol toy.

Bassnett, T., 1860, July 17, Compass correctors.

Bastet, L., & *Seligman, H.* (Newton), 2759, Oct. 17, [Electric batteries].

Bate, D., 2016, Aug. 1, Corn-mills.

— *J. L.*, & *Reed, J.*, 3098, Nov. 16, Axles.

Bateman, A. H., 2314, Sep. 2, Artificial fuel.

Bates, M., 2912, Oct. 31, Fire-proof floors, ceilings, &c.

Bateson, S. S., 1137, Apr. 28, Fumigators.

Batley, W. S., & *Nichols, W.*, 967, Apr. 12, Feeding clay [in making bricks, &c].

Baudelot, F. V. (White), 1648, June 23, Producing [designs on metal plates].

Baudot, E., & *Roettger, E.*, 2531, Sep. 25, Motive-power.

Baville, E. P., 2575, Sep. 29, Tool holders.

Baxter, J. A., 547, Mar. 1, Railway brakes.
 Baxter, T. W. (Newton), 1462, June 1, Cutting, dress-
 [ing, &c., stone.
 Bayley, E. H., 3457, Dec. 21, Water-carts, &c.
 — J. & T., & Francis, W., 1225, May 5, Tanning.
 — T. & J., & Francis, W., 1225, May 5, Tanning.
 — W., 3037, Nov. 10, Roller-blinds.
 Baylis, M. E., 108, Jan. 14, Needle cases or wrappers.
 Baylis, H., 2387, Sep. 9, Nipple wrenches for fire-arms.
 — W., 1289, May 13, Fixing uprights for fencing, [&c.
 — W., 1836, July 13, Fencing.
 Bazault, J. E. & Edard, G. (Brewer), 1947, July 25,
 [Belts to prevent sea-sickness, &c.
 Bazin, E., 1668, June 26, Spinning and twisting.
 — E., 2289, Aug. 31, Extracting sand, &c., cleansing [ports, &c.
 Beale, B., & Gwynne, J. E. A., 3449, Dec. 20, Rotary- [engines.
 Bean, F. (Smith), 2157, Aug. 16, Lighting, &c., gas.
 Bean, R., & Barker, J., 114, Jan. 16, Furnace bars.
 Beard, J., 1986, July 28, Carding engines.
 Beasley, J. W., 395, Feb. 16, Ball-valves or taps.
 — J. W., 2156, Aug. 16, Ball-valves or taps.
 Beckett, J., & Cam, J. J., 2109, Aug. 10, Treating sewage.
 Becks, A. T., 286, Feb. 2, Utilizing tin-plate scrap.
 Beckwith, J. H. & Galloway, C. J., 247, Jan. 30, Valves.
 Beckwith, W. G. (Lake), 1201, May 3, Sewing-machines.
 Bède & Co. (Wise), 2702, Oct. 11, Operating on wool [cardings, &c.
 Beeson, J. S., 3155, Nov. 23, Horse-shoes.
 Behrns, G. L., 2304, Sept. 1, Applying exhaust to mill- [stones.
 Belcour, J. Ménéval- (Clark), 2679, Oct. 9, Self-acting [fan.
 Belicard, J., 2160, Aug. 16, Looms.
 — J., & Ditchfield, W., 57, Jan. 10, Looms.
 Bell, A., & Jones, F. R., 1477, June 3, Mechanical [reciprocal motion.
 — C. E., & J. H., 1120, Apr. 27, Carding engine con- [densers.
 — G. C., 2297, Aug. 31, Forging bolts, rivets, &c.
 Bell, G. C. (Lake), 3052, Nov. 11, Smiths' forges.
 Bell, H. C., 2411, Sep. 13, Fastening tramway rails to [sleepers.
 Bell, H. P., and Gisborne, F. N. (Baker), 1218, May 5, [Drills.
 Bell, J. C., Gregg, W. D., & Kelly, R. R., 2845, Oct. 24, [Utilizing gas liquor.
 — J. H., & C. E., 1120, Apr. 27, Carding engine [condensers.
 — S. A., 3083, Nov. 15, Match-boxes.
 — T., 3204, Nov. 27, Removing slag from furnaces.
 — T., Urquhart, W. W., & Lindsay, J., 306, Feb. 4, [Power-looms.
 Benda, G. (Mewburn), 3494, Dec. 27, Dolls and other [figures.
 Bender, R. W. (Day), 1886, May 23, Refining sugar.
 Bennett, A., & Stocks, G. J., 1800, July 10, Bells.
 — F., 1115, Apr. 27, Roofing tiles.
 — F., 1557, June 12, Roofing tiles.
 — H. O., 1273, May 11, Applying motive power.
 — John E. & J., & Hydes, T., 54, Jan. 10, Cooling [and condensing.
 — John E., & Hydes, T., 1161, May 1, Furnaces.
 — John E., & Hydes, T., 1162, May 1, Blast [engines.
 — Joseph & J. E., & Hydes, T., 54, Jan. 10, Cool- [ing and condensing.
 — Joseph J., & Rowe, N., 2780, Oct. 18, Asphaltic [paving.
 Bennison, M., & Law, J., 1312, May 15, Building hoists.

Benoit, Peyron, & Germain (Gedge), 1909, July 21, [Knitting.
 Benson, M. (Gardner & Turrell), 332, Feb. 8, Casters.
 — M. (Willson), 1446, May 31, Sewing-machines.
 — M. (Burdett), 1658, June 24, Organs.
 Bentall, E. H., 3307, Dec. 7, Screw-bolts, nuts, &c.
 Bentley, W., 1669, June 26, Administering balls to horses, [&c.
 Berdan, H. (Wilson), 1425, May 27, Cartridges.
 — H. (Wilson), 1718, July 3, Cartridge cases.
 — H. (Wilson), 2244, Aug. 26, Fire-arms.
 Bergue, A. de (Dalman y Sala), 1551, June 12, Sup- [plying water to steam-boilers.
 — A. & R. de, 1914, July 21, Veneer-cutting [machines.
 — R. & A. de, 1914, July 21, Veneer-cutting [machines.
 Berlet, E., 3336, Dec. 9, Imparting motion to shafts.
 Bernard, E. P., 2637, Oct. 5, Boxes for preserving meat, &c.
 Berrett, H. D. (Lake), 1365, May 20, Nitro-glycerine.
 Berryman, R. (Johnson), 2218, Aug. 23, Feed-water [apparatus.
 Bertin, A., 3118, Nov. 17, Chests for flagons, gloves, &c.
 Bertram, F. M. B. (Bertram), 1303, May 15, Knife [handles.
 Bertram, L. B., 1977, July 27, Stoppers for tobacco pipes.
 — L. B. (Bertram), 1303, May 15, Knife handles.
 Bertrand, P. (Bonneville), 2095, Aug. 9, Filling bottles.
 Berwick, G., 597, Mar. 6, Preservative composition.
 — G., & Robson, S. S., 1901, July 20, Preservative [composition.
 Besley, H., & Wheaton, W., 722, Mar. 17, Distributing [manure, &c.
 Bessemer, H., 223, Jan. 27, Discharging marine artillery.
 — H., 386, Feb. 15, Repairing, &c., converting [vessels.
 — H., 1466, June 1, Ordnance and projectiles.
 — H., 1737, July 4, Asphaltic pavement or floors.
 Bethune, Sir J., 1693, June 28, Traction-engine wheels.
 Betteley, J., 563, Mar. 2, Anchors and chains.
 — J., & Bremner, G. W., 3139, Nov. 20, Steering [ships.
 Beurlé, C., & Ujhely, H. (White), 2364, Sep. 7, Candles, [&c.
 Beuther, E. A. H. (Neuhaus), 806, Mar. 24, Axle-boxes.
 Bex, W., & Morris, E., 3479, Dec. 22, Boots and shoes.
 Bibby, W., Fleming, A., & Rawcliffe, J., 1731, July 4, [Mules for spinning.
 Bickerton, Ralph, & R., 567, Mar. 3, Harvesters.
 — Ralph, & R., 1021, Apr. 18, Harrows.
 — Ralph, & R., 2506, Sep. 22, Reaping and [mowing.
 — Richard & R., 567, Mar. 3, Harvesters.
 — Richard & R., 1021, Apr. 18, Harrows.
 — Richard & R., 2506, Sep. 22, Reaping and [mowing.
 Biddle, G., & Cotterill, C. F., 572, Mar. 3, Attaching [taps to pipes.
 Biddulph, W. W., 1070, Apr. 22, Railway breaks.
 Bilange, C. R., & Lair, J. A. F. (Wilson), 1314, May 16, [Sugar.
 Billingham, M. (Ojeda), 2365, Sep. 7, Harrows.
 Bing, B. J., 167, Jan. 23, Securing artificial teeth.
 Binks, C., 3500, Dec. 28, Treating aniline dye residues.
 Binnie, G., 834, Mar. 29, Pots and other hollow castings.
 Birch, J., 1706, June 30, Steel.
 Birchall, A. M., 641, Mar. 10, Preventing steam boiler [explosions.
 — A. M., 898, Apr. 5, Preventing steam boiler [explosions.
 — A. M., 899, Apr. 5, Low-water apparatus for [steam-boilers.

- Bird, H., 1193, May 3, Concrete buildings.
 Birt, A. W. & J., 3104, Nov. 16, Life preserving mattress.
 — J. & A. W., 3104, Nov. 16, Life preserving mattress.
 Bishop, W., & Blick, J., 2167, Aug. 17, Removing dust
 [from carpets].
 Blackburn, A. B., 465, Feb. 22, Pens.
 — A. B., 1498, June 6, Pens.
 — W., 1767, July 6, Adjustable brackets.
 Blackmore, J., 188, Jan. 25, Cisterns.
 Blackwell, A., & Bradshaw, A., 55, Jan. 10, Knife handles.
 Blaine, D. P., 2544, Sep. 27, Carriage brakes.
 Blair, T. S., 635, Mar. 10, Reducing iron ores.
 — T. T., 1486, June 5, Composition for coating
 [ships, &c].
 Blaise, L., 2594, Oct. 2, Urinometers, and other measures.
 Blake, J., & Mack, W. A. (Henry), 254, Jan. 31, Sewing
 [machines].
 — L. R. (Lake), 3323, Dec. 8, Sewing boots & shoes.
 Blakemore, R., Sherring, W. A., & Horstman, H., 2379,
 [Sep. 8, Locking and unlocking bolt nuts].
 Blakey, J., 2978, Nov. 6, Machine brakes.
 Blamires, T. H., 2924, Oct. 31, Spinning or twisting.
 — T. H., & Marsden, H., 705, Mar. 16, Carding-
 [engines].
 Blanchard, L. H., Bang, I., & Provost, L. L. H. (Clark),
 [2983, Nov. 6, Phosphate of ammonia].
 Blanchett, T., 9, Jan. 3, Exhibiting names of stations.
 Blanford, W., 374, Feb. 15, Sewing-machines.
 Blarcom, A. L. van, & Hall, T. S. (Lake), 2150, Aug. 15,
 [Signalling].
 Blick, J., 2012, July 31, Untwisting and combing hair, &c.
 — J., 3156, Nov. 22, Air-gas.
 — J., & Bishop, W., 2167, Aug. 17, Removing dust
 [from carpets].
 Blomerley, J., 40, Jan. 7, Sawing, slotting, &c., railway
 [sleepers].
 Bloomfield, B., 1332, May 17, Dressing millstones.
 Blumfeld, L. (Hiess), 1320, May 16, Pipes, cigar
 [tubes, &c].
 Blunn, W., & Wild, J., 1504, June 7, Fire-grates and
 [furnaces].
 Boardman, S., & Shaw, T. R., 1283, May 12, Lubricators.
 Boby, R., 676, Mar. 14, Screening corn.
 Boequet, E., 3525, Dec. 30, Making coffee, tea, &c.
 Boehringer, J. G., & Krall, C., 214, Jan. 27, Retarding
 [motion].
 Boggett, W., & Macintosh, J., 1226, May 6, India-rubber
 [beds, &c].
 — W., & Macintosh, J., 3140, Nov. 21, Female attire.
 Bokman, F. (Hunt), 1081, Apr. 24, Breech-loading
 [rifle, &c].
 Bolding, J. L. & J. T., & Titsink, J., 35, Jan. 6, Water-
 [closets and valves].
 — J. T. & J. L., & Titsink, J., 35, Jan. 6, Water-
 [closets & valves].
 Bollé, C. F. H., 3415, Dec. 16, Winding yarn or thread.
 Bolton, E., 678, Mar. 14, Oil cakes.
 — F., 2707, Oct. 12, Railway umbrella stands.
 — J., 1231, May 6, Steam generators.
 Bolzano, T. von, 1349, May 19, Grates for coal dust.
 Bond, R., & Stewart, C., 594, Mar. 6, Loom-templates.
 — W., & Foster, J., 774, Mar. 22, Printing machines.
 — W., & Foster, J., 3237, Nov. 30, Printing machines.
 Bonneville, H. A. (Martin), 721, Mar. 17, Carding fibres.
 — H. A. (Bertrand), 2095, Aug. 9, Filling
 [bottles].
 — H. A. (Guerrero, Cadoux & O'Connell),
 [2096, Aug. 9, Paving].
 Bontems, J. (Gedge), 2510, Sep. 23, Lighting & heating.
 Booth, J. B., & Draper, G. & W. F., 737, Mar. 18,
 [Spinning, doubling, &c].
 — R., 3298, Dec. 7, Artificial gums.
 Booth, T. W., 2850, Oct. 24, Substitute for leather.
 Borgnet, A., 1092, Apr. 25, Retorts, muffles, and pots.
 Borland, J. Y., 2221, Aug. 24, Spinning, &c.
 Borlase, T., 928, Apr. 8, Treating ores and minerals.
 Bosson, J. J. (Newton), 2831, Oct. 23, Ribbon slivers.
 Boston, H. G., 3327, Dec. 9, Igniting cigars, cigarettes, &c.
 Bothams, J. C., 637, Mar. 10, Pipes for sewage, &c.
 Botterill, J., & Morrell, R. W., 4, Jan. 2, Crape cloth.
 Bottomley, H., 1670, June 26, Treating yarn in doubling.
 — J., & Haggis, W., 1515, June 8, Preparing,
 [combing, &c. fibres].
 Bottrill, H. D., 2419, Sep. 14, Working loom shuttles.
 Bouch, W., 64, Jan. 10, Retarding steam engines.
 — W., 1773, July 6, Steam-engines.
 Boulton, I. W., 874, Apr. 1, Steam-boilers.
 Bourau, L. (Smith), 1966, July 27, Combing fibres.
 Bourne, R., & Campell, J., 1265, May 11, Constructing,
 [&c. floating bodies].
 Bousfield, E. T. & Howard, J., 1163, May 1, Tubular
 [steam-boilers].
 — G. T. (Whipple), 587, Mar. 4, Lamp wicks.
 — G. T. (Brown), 1041, Apr. 20, Extracting, &c.
 [fibres].
 — G. T. (Goddard & Adams), 2064, Aug. 4, Re-
 [frigerative vessels, &c].
 Bouttier, L., & Lengelé, A. (Smith), 2867, Oct. 25,
 [Wheels and axles].
 — L. Vincent, C. & Lengelé, A. (Smith), 2363,
 [Sep. 7, Clips or shears].
 Bowden, J., & Shaw, R., 1427, May 27, Felt hats, &c.
 Bower, J., 2422, Sep. 14, Refining iron.
 Bowie, S. R. (Libbey), 1570, June 14, Glass-blowers'
 [moulds].
 — S. R. (Libbey), 1664, June 24, Glass blowers'
 [moulds].
 Bowker, W., 2692, Oct. 11, Drilling & punching machines.
 Bowron, J., & Brown, J. H., 162, Jan. 21, Paper.
 Bowser, J. C., 1960, July 26, Printing newspapers.
 Bowyer, Sir G., 1885, July 19, Road or tramways.
 Box, J. (Surowicz), 3406, Dec. 15, Compressing dust coal,
 — W. W., 1049, Apr. 21, Gas.
 Boyd, R. (Ter Meulen), 263, Feb. 1, Dispersing sand,
 [&c.; probes].
 — R. W., 559, Mar. 2, Safety-valves.
 Boyden, W. W., & Gale, W. J., 3376, Dec. 13, Utilizing
 [waste leather].
 Boyes, E., 505, Feb. 25, Roasting coffee and cooling it.
 Boyle, R., 221, Jan. 27, Ventilators & smoke extractors.
 Boyman, R. B., 944, Apr. 10, Ships, boats; aerial
 [machines].
 Boynton, J., 1564, June 13, Pen-wipers.
 Bracken, R., 3107, Nov. 16, Tramways.
 Bradbury, H., & Pearson, W., 881, Apr. 3, Looms.
 — W., & Whittaker, H., 976, Apr. 13, Stillage
 [for presses].
 Bradley, C., & Smith, I. B. & H., 902, Apr. 5, Wool
 [combing].
 — C., & Smith, I. B. & H., 1865, July 17, Comb-
 [ing silk, &c].
 — E. F., 1075, Apr. 22, Brushes.
 Bradshaw, Aaron, 1508, June 7, Printing.
 — Albert, & Blackwell, A., 55, Jan. 10, Knife
 [handles].
 Brady, Sir A., Dresser, H. E., & Harris, M. M. (Wash-
 [burn]), 2788, Oct. 19, Couplings.
 Bramwell, E., 2962, Nov. 4, Preparing salts for treat-
 [ment by gases, &c].
 — F. J., 657, Mar. 13, Portland cements;
 [furnaces].
 Brand, H. W., 20, Jan. 5, Meat extract & preserved milk.
 Brandon, A. H. (De Gonzalo & Grisei), 1815, July 12,
 [Ships' mattresses, &c].

- Brandon, A. H. (*Hotchkiss*), 2296, Aug. 31, Projectiles.
 — A. H. (*Fogelberg*), 3086, Nov. 15, Musical instruments
 — D. H. (*Fogerty*), 3483, Dec. 23, Water-meters
 [and motors.
Brandreth, B. (*Seyd*), 2938, Nov. 1, Medical plasters, &c.
Brandt, J., *Lehr*, R., *Fisher*, C. G., & *Brecht*, T. C.
 [(Lake), 1327, May 16, Steam-engines.
Brannon, P., 2703, Oct. 11, Fireproof buildings.
Brasen, C. E., *Matthiesen*, J. P., & *Castenskiold*, C.
 [(Agerup), 736, Mar. 18, Steam vessels.
Brasier, E., 444, Feb. 21, Hulling, &c. grain.
 — E., 2388, Sep. 9, Treating fibres for paper-pulp.
 — E., & *Hodgkin*, J. E., 92, Jan. 13, Breaking and
 [scutching flax, &c.
Braundbeck, J. (*Mencke*), 2461, Sep. 19, Sewing-
 [machines.
Bray, J., 3367, Dec. 13, Water-meters.
Breach, J. R., 961, Apr. 12, Brush for cleaning sauce-
 [pans, &c.
 — J. R., 2194, Aug. 21, Gas fires.
Breche-Viger, L. la (Lake), 3246, Nov. 30, Steel.
Brecht, T. C., *Brandt*, J., *Lehr*, R., & *Fisher*, C. G.
 [(Lake), 1327, May 16, Steam-engines.
Breckon, J. R., & *Joy*, D., 2743, Oct. 16, Screening coal.
Breh, F. S., & *Descamps*, E. C., 941, Apr. 10, Building
 [blocks.
Breitenbach, C., 1618, June 20, Scouring & cleaning floors.
Bremme, G. A. C., 2708, Oct. 13, Wheels for traction
 [engines, &c.
Bremner, G. W., & *Betteley*, J., 3139, Nov. 20, Steering
 [ships.
 — S., 1989, July 28, Printing machines.
Brennan, D. (*Newton*), 1743, July 4, Roads, pavements, &c.
Bresson, A., 2407, Sep. 12, Carrying bitumen for paving, &c.
 — A., 2541, Sep. 27, Making asphalt.
Bret, B. le (*Gedge*), 2171, Aug. 18, Signalling on trains.
Brett, S. (Lake), 2151, Aug. 15, Bale-ties.
Brewer, E. G. (*Appleton*), 1945, July 24, Knitting
 [machinery.
 — E. G. (*Edard & Bazault*), 1947, July 25, Belts
 [for preventing sea-sickness, &c.
Briart, A., 2315, Sep. 2, Screening coal, &c.
Bridson, H., 3190, Nov. 25, Clearing ships of bilge water;
 [motive power.
Brierley, S., 1277, May 12, Bleaching.
Briggs, H., 1584, June 15, Removing sunken vessels, &c.
 — James, Willan, R., & *Lewis*, D., 914, Apr. 6,
 [Warping & beaming.
 — John, & *Bailey*, J., 568, Mar. 3, Aërated waters.
 — T., 2971, Nov. 4, Waterproof and other fabrics.
Brigham, J., & R., 815, Mar. 27, Reaping and mowing.
 — R., & J., 815, Mar. 27, Reaping and mowing.
Bright, F. J., & *Barraclough*, E., 1294, May 13, Looms.
 — H., 2274, Aug. 30, Drying sewage, &c.
 — R., 1915, July 21, Lamps.
Brimelow, P., 3426, Dec. 18, Warping or beaming machine.
Britten, B., 715, Mar. 17, Artillery and projectiles.
Britton, B. F. & *Minor*, P. E. (*Wright*), 1208, May 4,
 [Waterproof compounds.
Broad, J., 225, Jan. 28, Paper-pulp.
 — J., 1994, July 28, Paper-pulp.
Broadbent, J. K., *Schäffer*, B. A., & *Budenberg*, C. F., 681,
 [Mar. 15, Pressure gauges.
 — L. E., 799, Mar. 24, Cutting the nap from fabrics.
Broadley, J., & *Hodgson*, G., 751, Mar. 20, Looms.
Broadwell, L. W. (*Smith*), 250, Jan. 31, Mitraillesuses.
 — L. W. (*Smith*), 380, Feb. 15, Gun-carriages.
 — L. W. (*Smith*), 3274, Dec. 5, Case for cartridges.
Broca, F. de (*Hinchliff & Chapman*), 1755, July 5, Sights
 [for ordnance and fire-arms.
Brock, J., 59, Jan. 10, Letters, numerals, sign boards, &c.
- Brock*, J. J., 1771, July 6, Moustache protectors.
Brocklehurst, C., 1261, May 10, Drawing & compressing
 [silk.
Brode, L. A., & *Bash*, G., 1786, July 7, Bobbins.
Brodie, A., 2482, Sep. 21, Belts for machinery.
Brodie, G. (*Edwards*), 1764, July 6, Bale-ties.
Brodie, J., 1957, July 26, Reclaiming land and deepening
 [tide-ways.
Broel, J., 1507, June 7, Perforating designs in fabrics.
Bromage, T. P., 3136, Nov. 20, Flutes.
Bromfield, J. C., & *Lackersteen*, J. F., 1004, Apr. 15,
 [Cigarette papers.
Bromilow, J., 422, Feb. 17, Reverberatory furnaces.
Brook, R. G., 963, Apr. 12, Letter boxes and plates.
Brooke, J. & *Warner*, R., 1919, July 21, Pumps.
 — S., 1118, Apr. 27, Carding engine condensers.
 — W., 2447, Sep. 16, Forming necks of bottles.
Brookes, W. (*Leroy*), 1031, Apr. 19, Scouring & rinsing
 [wool.
 — W. (*Du Rieux & Roettger*), 2378, Sep. 8, Fil-
 [tering presses.
Brooks, E., & *Fletcher*, J., 1276, May 12, Weaving towels.
Brooks, F. W. (*Mills*), 1440, May 30, Seals for locks, &c.
 — F. W., & *Marston*, H. C. (*Mills*), 3265, Dec. 2,
 [Fastening stair-roads, &c.
Brooks, H., 3262, Dec. 2, Infants' feeding bottles.
Broomhall, C., 1328, May 17, Railway carriage door locks.
Brotherhood, P., & *Kittoe*, G. D., 143, Jan. 20, Regulating,
 [and flow of fluids.
 — P., & *Kittoe*, G. D., 648, Mar. 11, Steering
 [vessels; valves.
Brough, J. & *Fletcher*, G., 1777, July 7, Vacuum pans.
Brough, J., & *Gilson* W. H. (*Dawlings*), 1406, May 25,
 [Decolorising liquids and gases.
Brough, N., 1343, May 19, Fastenings for braces, belts, &c.
 — N., & *Rollason*, W., 2524, Sep. 25, Box for
 [matches &c.
 — N., & *Rollason*, W., 2820, Oct. 21, Box for
 [matches, &c.
 — R., & *Mace*, C., 643, Mar. 10, Steam-boilers.
Broughton, F., & *Stephens*, R., 2341, Sep. 5, Breaks for
 [railways.
 — W., 2838, Oct. 24, Signalling in trains.
Brown, A. B., 2253, Aug. 28, Slide-valves.
 — A. B., 2529, Sep. 25, Slide-valves.
 — A. G., 1859, July 17, Disinfecting water closets, &c.
Brown, A. P. (*Newton*), 357, Feb. 11, Wind-mills.
 — A. P. (*Newton*), 2107, Aug. 10, Wind-mills.
Brown, B., 2466, Sep. 19, Boilers for treating wood, &c.
 — B. L., 3275, Dec. 5, Straightening tubes & bars.
 — C., 3354, Dec. 12, Removing dust from carriages, &c.
 — D. S., 2338, Sep. 5, Motive-power.
 — D. S., 2854, Oct. 25, Scale boards and veneers.
 — D. S., 3007, Nov. 8, Barometers & thermometers.
Brown, E. W. (Lake), 2417, Sep. 14, Stuffing boxes and
 [packing.
Brown, H. E., 1784, July 7, Carriages.
 — I., 1940, July 22, Irrigating land, watering, &c.
 — James, 1838, July 13, Protecting bottoms and sides
 [of ships.
Brown, James (*Bousfield*), 1041, Apr. 20, Extracting
 [and fibres.
 — James S. (*Johnson*), 532, Feb. 27, Gunpowder.
 — Jefferson, & *Buxton*, W. H. (Lake), 1128, Apr. 28,
 [Securing pocket books, &c.
Brown, John, 401, Feb. 16, Collars, cuffs, & shirt-fronts.
 — John Harcourt, 2949, Nov. 3, Roadways, foot-
 [paths, &c.
 — John Henry, & *Bowron*, J., 162, Jan. 21, Paper.
Brown, S. N., & *Miles*, A. O. (*Clark*), 1026, Apr. 18,
 [Money-till lock, and alarm.
Brown, W., 2888, Oct. 27, Artificial leather.

Brown, W. A., & Jones, R. L., 1059, Apr. 22, Matches.
 — W. H. & Lockwood, W., 508, Feb. 25, Cast steel.
 — W. Morgan- (Goulding), 1199, May 3, Engines.
 Browne, A. (Basset), 2640, Oct. 5, Pistol toy.
 Browne, H. J., & Hope, A. (Johnson), 741, Mar. 18,
 [Breaking stone, &c.
 — H. J., & Hope, A. (Johnson), 3508, Dec. 28,
 [Breaking stone, &c.
 Browning, T., & Milburn, R., 2696, Oct. 11, Treating
 [sewage, &c.
 Brydges, C. J., & Kerr, W. H. (Lake), 1647, June 22,
 [Rifles.
 Brydon, R., & Kendall, J. D., 884, Apr. 3, Signal in-
 [dicators.
 Buckland, C., 3253, Dec. 1, Head rest for railway carriages.
 Buckley, G. R. & J., 2824, Oct. 23, Furnaces.
 — H. & R. W., & Wolstenholme, R., 3051, Nov. 11,
 [Velvets, &c.
 — J., G. & R., 2824, Oct. 23, Furnaces.
 — R., J. & G., 2824, Oct. 23, Furnaces.
 — R. W. & H., & Wolstenholme, R., 3051, Nov. 11,
 [Velvets, &c.
 Budenberg, A. (Mühlrad), 454, Feb. 22, Injectors,
 [raising and forcing liquids.
 — A. (Schaeffer & Budenberg), 456, Feb. 22,
 [Steam-engine indicators.
 — A. (Ehrhard), 595, Mar. 6, Pumps.
 — A. (Buss), 1954, July 25, Link-motion of
 [engines.
 Budenberg, C. F., & Schaeffer, B. A. (Budenberg), 456,
 [Feb. 22, Steam-engine indicators.
 — C. F., & Schaeffer, B. A., & Broadbent, J. K.,
 [681, Mar. 15, Pressure-gauges.
 Bulkeley, R. J., 2305, Sep. 1, Loading cattle-trucks.
 Bull, E., 1094, Apr. 25, Electric telegraphs.
 — W., & Hall, D., 2747, Oct. 17, Salt.
 Buller, E. W., 211, Jan. 26, Attaching knobs, &c. to
 [spindles.
 Bullock, M. C., & Shelley, J., (Haseltine), 3270, Dec. 4,
 [Excavating rocks, &c.
 Bunning, H., & Chapman, J., 2403, Sep. 12, Paving
 [compounds.
 Bunyard, J. B., 580, Mar. 4, Portfolio stands.
 Burdett, R. (Benson), 1658, June 24, Organs.
 Burge, G., 2722, Oct. 13, Paving; cements.
 Burman, J., 545, Mar. 1, Brushes, brooms, &c.
 Burnand, J. T. N., 78, Jan. 12, Winding watches, chro-
 [nometers, &c.
 Burney, G., 197, Jan. 25, Iron tanks and cisterns.
 Burns, W., 1671, June 26, Pipe joints.
 Burr, D. A. (Prall), 2794, Oct. 19, Steam-pump & motor.
 — E. B., 258, Jan. 31, Carriage window-sashes, &c.
 Burrell, C., & Fowell, G. J., 3105, Nov. 16, Elastic
 [wheel-tyres.
 — T., 3061, Nov. 13, Washing machines.
 Barrow, J., 2659, Oct. 7, Treating sewage, &c.
 Barrows, A., & Rendle, J. E., 3002, Nov. 7, Glazing
 [buildings, &c.
 Barslem, W., 1855, July 15, Pickers for looms.
 Burstow, E., 312, Feb. 6, Drawing geometrical curves, &c.
 — E., 2310, Sep. 2, Sash-fasteners.
 Burton, C. T., 2252, Aug. 28, Paper-pulp.
 — J., & Mellers, J., 2264, Aug. 29, Clipping fabrics.
 — J. W., 1487, June 5, Treating oils, &c., for
 [lubricating.
 — R., & Greig, G., 1782, July 7, Transporting
 [produce.
 — R. & R. W., 760, Mar. 21, Traction-engine wheels.
 — R., & Shaw, R. H., 1412, May 26, Traction-
 [engine wheels.
 — R. W. & R., 760, Mar. 21, Traction-engine wheels.
 Busch, J., 746, Mar. 20, Regulating pressure & flow of gas.

Buss, E. (Budenberg), 1954, July 25, Link-motion of
 [engines.
 Busson, E. de (Haseltine), 126, Jan. 18, Table spoons.
 Butler, A. E., 497, Feb. 24, Naves of wheels.
 — J., 726, Mar. 17, Gauge for force pumps.
 Butler, J. T. (Lake), 3264, Dec. 2, Bale-tie or fastening.
 Butler, J. W., 232, Jan. 28, Bottle-stoppers.
 Butterfield, E. L., Allen, R. N., Kimball, L. W., &
 [Mallory, W. H. (Newton), 1370, May 22,
 [Railway wheels.
 Butterfield, I., & Ingham, O., 1100, Apr. 26, Finishing
 [fabrics.
 Butterworth, E., & Hawksworth, M., 3025, Nov. 9, Looms.
 — E., & Heap, J., 2712, Oct. 13, Boilers and
 [furnaces.
 — G., Hamer, J., & Carr, G. W., 577, Mar. 3,
 [Printing fabrics.
 — T., 1793, July 8, Spinning, &c., tobacco.
 — W., & Howarth, J., 1636, June 22, Con-
 [suming smoke.
 Buttery, W., & Pashley, J., 451, Feb. 21, Fire-arms.
 Buxton, G., 564, Mar. 2, Railway rails and chairs.
 Buxton, W. H., & Brown, J. (Lake), 1128, Apr. 28,
 [Securing pocket books, &c.

C.

Cade, G. (Newton), 2079, Aug. 7, Belt fastenings.
 Cadman, H., 1148, Apr. 29, Printing machines.
 — W., 1862, July 17, Window blinds, screens, &c.
 Cadoux, L. A., O'Connell, E., & Guerriero, A. (Bonne-
 [ville), 2096, Aug. 9, Paving.
 Calantarients, J. A., 3517, Dec. 29, Preventing bursting of
 [pipes, &c.
 Caleagno, P. (Johnson), 1023, Apr. 18, Composing and
 [translating secret correspondence.
 Calkins, J. B. (Lake), 2044, Aug. 2, Railway vehicles
 [for cattle, &c.
 Calverley, J., & Mac Donald, J. C., 1644, June 22,
 [Printing and cutting paper.
 Calvert, C. A., 2776, Oct. 18, Registering, &c., receipt of
 [money.
 — C. A., 2777, Oct. 18, Signalling on railways, &c.
 Cam, J. J., & Beckett, J., 2109, Aug. 10, Treating sewage.
 Cameron, A. S. (Lake), 838, Mar. 29, Steam pumps; gas
 [exhausters, &c.
 — A. S. (Storer), 1663, June 24, Wheelbarrows
 [and trucks.
 Cameron, C. A., & McKenzie, W., 2806, Oct. 20, Solidified
 [tea and coffee.
 — J. G., 15, Jan. 4, Furnaces.
 — J. G., 2930, Nov. 1, Steering ships by steam
 [power.
 Camp, G., 2857, Oct. 25, Harmoniums.
 Campbell, A. & Clark, R. (Day), 1259, May 10, Traction-
 [engines.
 — A. & Clark, R. (Day), 2051, Aug. 3, Tillage
 [anchors.
 — A. & Clark, R. (Day), 2205, Aug. 22, Engine
 [wheels.
 Campbell, A. S. (Campbell), 2285, Aug. 30, Evaporating
 [steam.
 — J. J., 2234, Aug. 25, Packing tubes of con-
 [densers.
 — R., Appleby, C. J., & Leplay, J., 2, Jan. 2,
 [Extracting saccharine matters.
 Campbell, T. (Campbell), 2285, Aug. 30, Evaporating
 [steam.
 Campbell, W., 1534, June 9, Life-boats.

- Campbell, W., 1678, June 27, Lowering boats.
 — W. M., 763, Mar. 21, Letter-boxes.
 Campell, J., & Bourne, R., 1265, May 11, Constructing, [&c. floating bodies.
 Campion, J., 2894, Oct. 28, Confectionery.
 — W. & W., 660, Mar. 13, Knitting machinery.
 Candy, F., 2625, Oct. 4, Roads, ways and floors.
 Cannell, H., 436, Feb. 18, Hot-water boilers.
 Cannon, W. G., 619, Mar. 8, Gas, steam, or water cocks.
 Cantelow, W., Groat, E., & Pond, M. B. (Haseltine), 2583, [Sep. 20, Churns.
 Cantwell, E. L. (Lake), 2226, Aug. 24, Roofing tiles.
 Capron, E. P. H. (Lake), 1082, Apr. 24, Turbine water- [wheels.
 Carleton, C., & Willcox, C. H. (Willcox), 1744, July 4, [Sewing-machines.
 Carpenter, J., 1279, May 12, Unloading vehicles.
 Carr, G. W., Butterworth, G., & Hamer, J., 577, Mar. 3, [Printing fabrics.
 — T., 2334, Sep. 4, Flour.
 Carrington, W. E. (Crespin), 3161, Nov. 22, Felt hats.
 Carter, G. H., 638, Mar. 10, Paddle-wheels.
 — G. H., 2826, Oct. 23, Biscuits.
 Carteron, J. A., & Rimmel, E., 115, Jan. 16, Waterproof [fabrics.
 — J. A., & Rimmel, E., 118, Jan. 17, Rendering [materials unflammable, &c.
 Cartwright, H., 952, Apr. 11, Ploughs.
 — T., 1872, July 18, Steam-engines.
 Carver, B. F., McCune, C. W., & Smith, H. N. (Clark), [1441, May 30, Eyelets.
 Carver, J., 529, Feb. 27, Bobbin net or twist-lace.
 — J., 797, Mar. 23, Bobbin net or twist lace.
 Casebourne, G. E., 120, Jan. 17, Steering vessels, &c.
 Casella, L. M., 2805, Oct. 20, Thermometers.
 Castenskiold, C., Brasen, C. E., & Matthiesen, J. P. [(Agerup), 736, Mar. 18, Steam vessels.
 Casthelaz, J., & Depouilly, C., 1879, July 19, Finishing [yarns, &c.
 Castle, J., & Turton, C., 3125, Nov. 18, Sickles.
 Catchside, W. F., 2920, Oct. 31, Recovering alkali from [lyes.
 Catlin, S. C. (Lake), 2828, Oct. 23, Ink-stands.
 Catlow, C., 2589, Sep. 30, Looms.
 — C., Whitaker, J., & Lupton, B., 631, Mar. 9, [Washing clothes.
 Chadborn, G. L. & Coldwell, T. (Griffin), 2397, Sep. 12, [Lawn-mowers, &c.
 Chadwick, E., 1479, June 3, Walls, floors, &c.
 Chaffer, G. L., 2038, Aug. 2, Blowers for fire grates.
 — W., & Woodhouse, J. E., 1222, May 5, Clearing, [drawing, spinning, &c., fibres.
 Chagnaud, P. (Serre), 2610, Oct. 3, Harness.
 Chambers, J. W., & Elton, F. E., 302, Feb. 4, Artificial [fuel.
 Chameroy, E. A., 2033, Aug. 2, Regulating pressure of [fluids.
 Champney, G. F., & Hayward, J. W. (Lake), 2687, Oct. 10, [Dies.
 Chance, H. (Gridley), 1243, May 8, Retorts for acids.
 Chapman, C. P. L., & Hinchliff, G. S. (De Broca), 1755, [July 5, Sights for ordnance & fire-arms.
 — C. W., 28, Jan. 6, Straightening and rolling [metallic banding.
 — G. T., 2440, Sep. 16, Coating with india- [rubber, &c.
 — J., & Bunning, H., 2402, Sep. 12, Paving [compounds.
 — L., 1566, June 13, Gang plough.
 — M., 191, Jan. 25, Cabinets for liqueur bottles.
 — W. Z. W., 3489, Dec. 26, Fastening carriage [curtains.
 Chappé, T. F., 1395, May 24, Valves.
 Charles, J., & Taylor, C., 1738, July 4, Floor-cloth and [leather.
 Chase, W. H., 2248, Aug. 26, Moving railway carriages [and trucks.
 — W. H., 2877, Oct. 26, Animal trap.
 — W. H., 3138, Nov. 20, Coating and strengthening [paper, &c.
 Chastelain, C. de, 2567, Sep. 29, Treating sewage, &c.
 Chatfield, F. J., 1752, July 5, Steam boiler furnaces.
 — F. J., 2142, Aug. 15, Steam-boiler furnaces [and doors.
 Chatterton, G. & Mayor, T. (Lake), 362, Feb. 14, Spin- [ning flyers.
 Chaudet, J. H., 2871, Oct. 26, Treating dye woods for [laces, &c.
 Cheesbrough, F. J. (Gray), 1278, May 12, Self-raising flour.
 Cherpit, G., & Geisenberger, E., 3056, Nov. 13, Motive- [power.
 Cherry, H., 809, Mar. 25, Pulley-blocks.
 — J., & Wade, J. A., 74, Jan. 12, Tiles.
 Chevot, J. L., 983, Apr. 13, Oiling-can.
 Chevrillon, A. (Abel), 1894, July 20, Ventilating hats.
 Chew, C. F., 1455, June 1, Pianofortes.
 Chichester, C. F., & L. S., 3346, Dec. 11, Preparing [grain for grinding.
 — L. S., & C. F., 3346, Dec. 11, Preparing [grain for grinding.
 Childs, A. B., 3511, Dec. 29, Hulling & polishing grain.
 — A. B. & D. M., & Fry, J. W., 2105, Aug. 10, [Dressing, &c., millstones.
 — A. B. & D. M. (Sweet), 3510, Dec. 29, Excavating [ditching, &c.
 — D. M. & A. B. (Sweet), 3510, Dec. 29, Excavating [ditching, &c.
 — D. M. & A. B., & Fry, J. W., 2105, Aug. 10, [Dressing, &c., millstones.
 Chipman, G. C. (Smith), 1714, July 1, Postal envelopes.
 Chisholm, H. (Lake), 1965, July 27, Converting steel.
 Choate, S. F. van, 394, Feb. 16, Fire-arms.
 Christoffers, M., 878, Apr. 3, Knitting machines.
 Christopher, J. S., & Lackersteen, J. F., 282, Feb. 2., [Screws & screw-drivers.
 Christy, T., Siebe, H. H., & Gorman, W. A., 3441, Dec. 20, [Raising sunken vessels.
 Chrystal, G., 1975, July 27, Steam-boilers.
 Church, J., 305, Feb. 4, Distilling.
 Churchill, J. D., & Furlonge, W. H., 46, Jan. 9, Alkali [furnaces.
 Clark, A. M. (Hankinson), 5, Jan. 2, Carpet beaters.
 — A. M. (Ellis), 261, Jan. 31, Vapour-engines.
 — A. M. (Tower), 671, Mar. 14, Hand-cuffs & [shackles.
 — A. M. (Mussinan), 747, Mar. 20, Nail cutting [machine.
 — A. M. (Squier & Squier), 892, Apr. 11, Sugar- [cane mills.
 — A. M. (Rice & Driggs), 1009, Apr. 15, Treating [bone, hornpith, &c.
 — A. M. (Brown & Miles), 1026, Apr. 18, Money- [till lock, & alarm.
 — A. M. (Harrod), 1076, Apr. 24, Converting reci- [procating into rotary motion.
 — A. M. (Demarest & Mott), 1105, Apr. 26, Moulds [for cores.
 — A. M. (Arden), 1165, May 1, Discharging ord- [nance.
 — A. M. (Aubertin), 1181, May 3, Oxidising matters.
 — A. M. (Walsh), 1271, May 11, Coffers-dams.
 — A. M. (Havemeyer), 1352, May 19, Dressing, &c. [leather.
 — A. M. (Grawitz), 1374, May 22, Preparing colors.

Clark, A. M. (*Dervieux*), 1396, May 24, Strainers.
 — A. M. (*Townsend*), 1428, May 27, Battery-guns.
 — A. M. (*Smith, Carver & McCune*), 1441, May 30, [Eyelets.
 — A. M. (*Heilmann & Heilmann*), 1600, June 16, [Weaving.
 — A. M. (*Corbin*), 1676, June 26, Tramway & rolling [stock.
 — A. M. (*D'Argy*), 1727, July 3, Coffee-pots.
 — A. M. (*Baker*), 1846, July 14, Treating cancer, &c.
 — A. M. (*Barberot*), 1867, July 17, Penholders.
 — A. M. (*Lathrop*), 1976, July 27, Sewing-machines.
 — A. M. (*Tyrrell*), 2161, Aug. 16, Labelling boxes.
 — A. M. (*Lull*), 2162, Aug. 16, Auxiliary springs.
 — A. M. (*Gaensly & Rueger*), 2199, Aug. 21, Box [irons.
 — A. M. (*Dubois*), 2222, Aug. 24, Preserving iron [surfaces.
 — A. M. (*Robinson*), 2280, Aug. 30, Railway signals.
 — A. M. (*Green*), 2331, Sep. 4, Saws.
 — A. M. (*Arden*), 2380, Sep. 8, Discharging ordnance.
 — A. M. (*Williams, Williams & Douglass*), 2414, [Sep. 14, Spinning.
 — A. M. (*Baqué & Féraud*), 2451, Sep. 16, Cocks or [valves.
 — A. M. (*Livingstone*), 2513, Sep. 23, Valve motions.
 — A. M. (*Petitpierre*), 2616, Oct. 3, Steam-generators.
 — A. M. (*Tamin*), 2631, Oct. 4, Alimentary pre- [parations.
 — A. M. (*Gordon*), 2632, Oct. 4, Sewing-machine [treadles.
 — A. M. (*Ménonval-Belcour*), 2679, Oct. 9, Self- [acting fan.
 — A. M. (*Wiches*), 2700, Oct. 11, Iron & steel; [welding.
 — A. M. (*Decoudun*), 2791, Oct. 19, Condiment re- [ceptacle.
 — A. M. (*Short*), 2792, Oct. 19, Looms.
 — A. M. (*Herrmann*), 2852, Oct. 24, Traction-engines.
 — A. M. (*Plasse*), 2879, Oct. 26, Taffo-guano.
 — A. M. (*Meyer & Haas*), 2890, Oct. 27, Telegraphs.
 — A. M. (*Lavater & Michel*), 2910, Oct. 30, Spin- [ning rollers.
 — A. M. (*Morse*), 2934, Nov. 1, Ornamenting glass [surfaces, &c.
 — A. M. (*Gatling*), 2954, Nov. 3, Revolving guns.
 — A. M. (*Pratt*), 2960, Nov. 3, Distilling naphtha, &c.
 — A. M. (*Blanchard, Bang, & Provost*), 2983, [Nov. 6, Phosphate of ammonia.
 — A. M. (*D'Argy*), 3109, Nov. 16, Wire gauze.
 — A. M. (*Dubois*), 3152, Nov. 21, Travelling garments.
 — A. M. (*Leblond & Mulot*), 3277, Dec. 5, Steam- [engines.
 — A. M. (*McCullen*), 3295, Dec. 6, Domestic fire- [escape.
 — A. M. (*Moussard*), 3416, Dec. 16, Generating & [purifying gases.
 — A. M. (*Colacicchi*), 3447, Dec. 20, Gas.
 — A. M. (*Worthman*), 3463, Dec. 21, Reefing and [furling sails.
 — A. M. (*Love*), 3488, Dec. 23, Infants' caps.
 — C. F., 2412, Sep. 13, Box-irons.
 Clark, H. A. (*Munson*), 1525, June 8, Lubricator for [pulleys.
 — H. A. (*Munson*), 1760, July 6, Lubricating ap- [paratus.
 — H. A. (*Munson*), 1943, July 21, Opening envelopes, [cutting thread, &c.
 Clark, James, 953, Apr. 11, Rolling metals.
 — John, 128, Jan. 18, Railway breaks.
 — Josiah L., & Muirhead, J., 2418, Sep. 14, Tele- [graph instruments.

Clark, R., & Campbell, A. (*Day*), 1259, May 10, Traction- [engines.
 — R., & Campbell, A. (*Day*), 2051, Aug. 3, Tillage [anchors.
 — R., & Campbell, A. (*Day*), 2205, Aug. 22, Engine [wheels.
 Clark, W., 2688, Oct. 10, Steam boilers; cleaning same.
 Clarke, Alfred (*Clarke*), 1527, June 9, Shoemakers' pin- [cers.
 — Almon (*Smith*), 2126, Aug. 11, Carriage un- [brellas.
 Clarke, B., 171, Jan. 23, Mortice machine chisels.
 — E., & Hughes, J., 1481, June 3, Cages for [mines, &c.
 Clarke, F. G. & R., & Alexander, T. H. (*Lake*), 2936, [Nov. 1, Ferrules.
 Clarke, G., 479, Feb. 23, Fire-escapes.
 — J. F., 116, Jan. 16, Melting snow.
 — Richard, 1407, May 25, Fans for blowing, &c.
 Clarke, Robert & F. G., & Alexander, T. H. (*Lake*), [2936, Nov. 1, Ferrules.
 Clarke, T. E., 848, Mar. 29, Heating rooms.
 — W. (*Clarke*), 1527, June 9, Shoemakers' pincers.
 Clarkson, J., 3081, Nov. 15, Steam-pumps & engines.
 Claudet, F., 904, Apr. 5, Treating solutions from pyrites.
 — F., 1101, Apr. 26, Treating copper ores.
 — F., 2516, Sep. 23, Treating solutions from pyrites.
 Claus, C. F., 2906, Oct. 30, Slag building blocks.
 Clause, H., 379, Feb. 15, Taps or valves.
 Clausolles, E. E. P. (*Johnson*), 2613, Oct. 3, Water-meters.
 Clay, W., 1461, June 1, Gas furnaces.
 Clayton, L., 1129, Apr. 28, Finishing yarn & thread.
 — N., & Shuttleworth, J., 165, Jan. 21, Thrashing [& winnowing.
 — N., & Shuttleworth, J., 2001, July 29, Steam [engines.
 — R., & Howarth, W., 593, Mar. 6, Looms.
 Clegg, Albert, & Taylor, J. & J., 2577, Sep. 29, Looms.
 — Arthur, 366, Feb. 14, Sewing-machines.
 — G. A. & J., 226, Jan. 28, Fastening boots & shoes.
 — J. & G. A., 226, Jan. 28, Fastening boots & shoes.
 Cleghorn, J., & Reid, A., 3440, Dec. 19, Treating asbestos.
 Clemens, G. H. (*Lake*), 602, Mar. 6, Safety-valve and [whistle.
 Clements, J. M., 1933, July 22, Needle-setter & threader.
 Clifford, G., 1598, June 16, Clay and plumbago crucibles.
 Clift, E. C., 2673, Oct. 9, Two-wheel vehicles.
 Clinch, F., 3485, Dec. 23, Pad to prevent horses slipping.
 Clissold, W., 2072, Aug. 5, Carding engines.
 Clive, W. (*Mottram*), 287, Feb. 2, Cutting glass.
 Closson, J. B. M. P. (*Johnson*), 2711, Oct. 13, Shearing [animals.
 Clubbe, W. H., 1585, June 15, Artificial flowers.
 Cochrane, A., A. L. & W., 389, Feb. 15, Utilizing [“waste scouring liquors.”
 — A. A., 520, Feb. 27, Applying bituminous [compositions.
 — A. A., 2120, Aug. 11, Breakwaters, fore- [shores, &c.
 — A. A., 3482, Dec. 23, Heating and lighting.
 — A. L., A., & W., 389, Feb. 15, Utilizing [“waste scouring liquors.”
 — H. H., 349, Feb. 10, Working switches and [signals.
 — Walter, A. & A. L., 389, Feb. 15, Utilizing [“waste scouring liquors.”
 — William (*Guibal*), 173, Jan. 23, Indicating [velocity of air, and speed of machinery.
 Cockcroft, J., & Tankard, J., 772, Mar. 22, Reeling and [winding yarn.
 Cocker, T., 977, Apr. 13, Distributing fluids; damping [fabrics, &c.

- Cocking, J. T., 2295, Aug. 31, Surgical splints.
 — J. T., 2353, Sep. 6, Surgical splints.
 — J. T., 3283, Dec. 6, Corsets, stays, petticoats, &c.
 Cockshoots, J., Wrigley, T., & Weatherill, H., 179, [Jan. 24, Railway carriages.
 Codd, H., 2212, Aug. 22, Aerated liquid bottles.
 Cody, P. R. (Newton), 1770, July 6, Breech-loading [ordnance.
 Cohen, B. S., 1631, June 21, Pencils and pencil point [protectors.
 Coit, S. (Hughes), 3313, Dec. 7, Interlacing wire work.
 Colacicchi, R. (Clark), 3447, Dec. 20, Gas.
 Coldwell, T., & Chadborn, G. L. (Griffin), 2397, Sep. 12, [Lawn mowers, &c.
 Cole, F. S., 1813, July 12, Motive-power engines.
 — J., & Abbott, W., 2975, Nov. 4, Treating sewage, &c.
 — M. G., 56, Jan. 10, Watches and time keepers.
 — T., 2650, Oct. 6, Vent-pegs, or plugs.
 Coleman, H. S., & Morton, A. G. E., 1630, June 21, [Cultivating land; traction engines.
 Coles, F., 2324, Sep. 2, Refrigerating and cooling.
 — F., 2573, Sep. 29, Freezing and cooling.
 Collier, W. C., 786, Mar. 23, Steam drying cylinders.
 Collin, J., & Revell, J., 1992, July 28, Lubricating.
 Collingridge, A., & Stephen, W. (Johnson), 2261, Aug. 28, [Generating steam.
 Collins, E. E., 1840, July 14, Treating residuum of [glue, &c.
 — F., 1187, May 3, Door fastener.
 Collom, C. F., 440, Feb. 18, Treating ores.
 Collom, J. (Newton), 833, Mar. 28, Washing ores, &c.
 Colls, F. W., Atkinson, H., Michael, J. J., & Knight, T. W., [1650, June 23, Paper-pulp.
 — H., 161, Jan. 21, Horse-shoes.
 Colnot, J. B., 3100, Nov. 16, Bands and straps for [machinery, &c.
 Colton, F. B. (Johnson), 3507, Dec. 28, Carrying and [discharging loads.
 Common, A. A., 543, Mar. 1, Opening and closing cocks, [taps, &c.
 Comstock, J. J. (Lake), 1216, May 5, Hair cloth sub- [stitute.
 — W. G. (Macintosh), 1637, June 22, Seed [sower, cultivator, &c.
 Conisbee, W., 1029, Apr. 19, Printing from plates.
 — W., 3114, Nov. 17, Printing machine.
 Conlong, J., 178, Jan. 24, Looms.
 Connolly, J. (Gregory), 871, Apr. 1, Measuring fluids, &c.
 Conring, A. von, & Voigt, E. (Gedge), 566, Mar. 3, [Ostrich feathers, &c.
 Cook, I. B., 3347, Dec. 11, Boats.
 Cooke, J. F., 2556, Sep. 28, Pocket pencils.
 — R. H., & Kilpatrick, D., 3394, Dec. 14, Applying [galvanism.
 — W., & Taylor, J., 1513, June 8, Balance pistons.
 — Sir W. Fothergill, 2313, Sep. 2, Working railway [trains.
 — W. Z., 94, Jan. 13, Combined furniture.
 Cooley, R. B., 3054, Nov. 11, Elastic stockings, belts, &c.
 Cooper, R., 3404, Dec. 15, Road waggons.
 — W. B., & Richmond, T., 130, Jan. 18, Looms.
 Copeland, G. W. (Hunt), 3045, Nov. 10, Water-meters.
 Corbett, S., 300, Feb. 3, Pulping vegetables.
 — S., 1142, Apr. 28, Ploughs.
 — S., 1699, June 29, Ploughs and cultivators.
 — T., 135, Jan. 19, Ploughs.
 — W., & Griffiths, W., 650, Mar. 11, Fetting for [furnaces, &c.
 Corbin, H. A. (Clark), 1676, June 26, Tramway and [rolling stock.
 Corlett, H. L., 670, Mar. 14, Lifting railway carriages.
 Corlies, W., 3128, Nov. 18, Burglar proof safes.
 Cornthwaite, R., 2022, Aug. 1, Balling warps.
 Cornut, M. E. A. (Newton), 3321, Dec. 8, Spinning.
 Cornwall, M. M., 2987, Nov. 6, Railway signalling.
 Corron, C. (Ray), 2347, Sep. 5, Dyeing textile materials.
 Cotterell, J. F., Prudencio, F., & Wilcocks, N. G., 2945, [Nov. 2 Bottling aerated liquids; stoppers.
 Cotterill, C. F., & Biddle, G., 572, Mar. 3, Attaching [taps to pipes.
 Cotton, F. M., & Field, J. L., 3078, Nov. 15, Candlesticks.
 Cotton, G. (Greaves), 3526, Dec. 30, Cotton-gins.
 Cotton, J., & Osborne, T., 1494, June 5, Railway breaks.
 — S., 2669, Oct. 9, Hackling machines.
 — W., 3467, Dec. 22, Looped or knitted fabrics.
 Coulter, J., & Fawcett, T., 3461, Dec. 21, Engine governors.
 Counord, P. E. (Newton), 2895, Oct. 28, Sawing [machinery.
 Couppé, F., & Dujour, E. (Gedge), 1645, June 22, [Comfits or sugar plums.
 Court, R. & T., & Suggitt, R., 1254, May 9, Winding [cops, &c.
 — T. & R., & Suggitt, R., 1254, May 9, Winding [cops, &c.
 Courtchoux, L. (Henderson), 3520, Dec. 30, Cigar-cases.
 Courtemanche, R. (Hunt), 2031, Aug. 1, Aerial navi- [gation.
 Courtice, J. L., & Webb, F., 819, Mar. 27, American [organs.
 Cousins, J. J., 2782, Oct. 18, Window-sashes.
 Coventry, A., & Smith, W. F., 1812, July 12, Turning [&c. metals.
 Cowan, J. D. & T., 2723, Oct. 14, Scouring and clean- [ing grain.
 — T. & J. D., 2723, Oct. 14, Scouring and clean- [ing grain.
 Cowburn, J. & Murray, A., 686, Mar. 15, Looms.
 — T., 1546, June 10, Preventing explosion of [steam generators.
 Cowper, E. A., 1612, June 20, Driving drifts & sinking [shafts.
 Cox, C. J., 441, Feb. 18, Sowing seed.
 — J., 1241, May 8, Gymnastic appliances.
 — W. N., 1053, Apr. 21, Heating &c. feed-water of [boilers.
 Crabb, W., 1459, June 1, Hat plush.
 Craddock, E., & Guest, W., 144, Jan. 20, Ropes, cords, [wire ropes.
 — E., & De Negri, C., 557, Mar. 2, Expressing [oils, &c.
 Craig, R. S., 1956, July 25, Compounds for making soap.
 — T., 1605, June 17, Street sweeping machines.
 Craik, J. & Balshaw, W., 1253, May 9, Looms.
 Cramp, A. H. (Lake), 2984, Nov. 6, Sewing-machine [attachment.
 Crandall, D. V. (Lichtecheindl), 2690, Oct. 10, Mat- [tresses, &c.
 Crane J. (Newton), 1354, May 19, Railway couplings.
 Crane, P. M., & McGraph, D., 2989, Nov. 6, Cooling and [freezing.
 — P. M. & Moir, G., 3055, Nov. 13, Lubricating [steam-engines, &c.
 Craven, J., Fox, S., & Tannett, J. T., 1108, Apr. 27, [Hoisting cranes.
 Crease, J. F., 1186, May 3, Composition for coating [metals.
 Creissard A. Bros. (Gedge), 1864, July 17, Circular [brickwork.
 Crespi, E., 1454, June 1, Venetian-blinds.
 Crespin, A. (Carrington), 3161, Nov. 22, Felt hats.
 Crichley, H., 478, Feb. 23, Cooking ranges.
 Crichton, A., 1533, June 9, Fire-arms.
 Crighton, C. E. 1145, Apr. 28, Steam-boilers.
 — S. & W., 1045, Apr. 21, Preparing cotton, &c.

Crichton, W. & S., 1045, Apr. 21, Preparing cotton, &c.
Crispin, W. H., 283, Feb. 2, Washing debris from mines.
Crockford, C., 1531, June 9, Alkalies and their salts.

— C., 2024, Aug. 1, Alkalies & salts; metallic
[ores.
Crofts, J., Dawson, R., & King, J., 1683, June 27, Comb-
[ing fibres.

Croll, A. A., 845, Mar. 29, Obtaining salts of ammonia.
— A. A., 2062, Aug. 4, Fluid-meters.

Crookes, W., 2763, Oct. 18, Disinfectant & deodoriser.
Cropper, S. (*Bainbridge & Yorkston*), 675, Mar. 14,
[Printing.

— S. (*Morris*), 1050, Apr. 21, Printers' "rules."
Croskey, J. R. (*McKinley*), 1842, July 14, Paving,
[roofing, &c.

Crosland, J. S., 2749, Oct. 17, Steam-boilers.
Crosnier, E. A., 694, Mar. 16, Shields for soldiers.

— E. A., 769, Mar. 21, Matches.
Cross, G. J., 801, Mar. 24, Railways.

— W., 2230, Aug. 25, Cutting faces of smoothing irons.
— W., 3450, Dec. 20, Woven fabrics.

Crossley, A., & Law, J., 1191, May 3, Mules for spinning.
— A. B., & Balme, A., 424, Feb. 17, Punching,
[&c. plates.

— A. B. & Balme, A., 2139, Aug. 15, Punching
[&c. plates.

— J., 3226, Nov. 29, Kilns for annealing glass.
Crossman, C., & Ferguson, J. H., 98, Jan. 14, Attaching
[shoes to horses.

— C., & Ferguson, J. H., 1654, June 23, Horse-
[shoes.

Crowley, H. (*Grinder*), 3491, Dec. 27, Looms.
Crowther, J., 110, Jan. 16, Condenser carding engines.

Cruikshank, G. M., & Smith, W. R. (*Lake*), 2911,
[Oct. 30, Packing.

Cuff, A. St. G., 2410, Sep. 13, Looking glasses, &c.
Cummings, E. H., Heyes, G., & Entwistle, T., 1119,
[Apr. 27, Warping machines.

Cunningham, W. J., 2320, Sep. 2, Cutting type; carving,
[&c., wood, &c.

Cunnington, J., 3380, Dec. 13, Draining; preventing
[return of sewer gas.

Cunnold, W. G., 3092, Nov. 16, Coal hods, vases, &c.
Curtis, C. W., 1939, July 22, Gunpowder.

Curtis, David, & Graham, C. B. (*Lake*), 845, Mar. 29,
[Revolving ovens.

Curtis, Dexter, 2321, Sep. 2, Harness and saddles.
— F. (*Palmer*), 1410, May 25, Picking waste.

— M., & Rhodes, W. H., 2154, Aug. 16, Preparing
[fibres.

— R., & Greasley, W., 303, Feb. 4, Spinning and
[doubling.

Curtis, T. A. (*Hughes*), 2815, Oct. 21, Liquid-meters.
Curtis, W. J., 2040, Aug. 2, Obtaining extracts; filter-
[ing, &c.

Cutler, E. A., & Kellogg, J. F. (*Haseltine*), 21, Jan. 5,
[Sewing machines.

D.

Dahne, F. W., & Hughes, R., 81, Jan. 12, Treating bran
[for re-use.

Dale, W. A., 3340, Dec. 11, Varnishes.
Dalmau y Sala, E. (*De Bergue*), 1551, June, 12, Sup-
[plying water to steam-boilers.

Danehell, F. L. H., 2903, Oct. 30, Disinfectant.
Daniel, W., & Greig, D., 1599, June 16, Compressing air.

Danks, S. (*Lake*), 3465, Dec. 21, Supplying fuel to
[furnaces.

Dann, J. T. (*Ahrens*), 2237, Aug. 25, Pearl-hardening,
[white of baryta, &c.

Darling, J., 2050, Aug. 3, Lamps.
Darlington, J., 2657, Oct. 7, Steam & pneumatic engines.

Darwin, S. B., 90, Jan. 13, Gas-making.
— S. B., 1382, May 23, Gas.

Davage, C., 3014, Nov. 8, Shaping iron or steel axles, &c.
Davey, G., 2553, Sep. 28, Artificial marble.

— H., 277, Feb. 1, Steam-engines.
— J., 1537, June 10, Double-furrow turn-wrest
[ploughs.

Davidson, D., 1962, July 26, Steam-boilers.
Davies, B., & Eckersley, J., 2629, Oct. 4, Rotary furnaces.

— E., 592, Mar. 6, Railway chairs.
— E., & Hutchinson, E., 612, Mar. 8, Hydraulic
[machines.

— E., & Leyland, J., 2622, Oct. 4, Screw-bolts and
[nuts.

— John, 3469, Dec. 22, Medico-electricity.
— John S., & Norton, F., 36, Jan. 7, Steam-boilers.

— Joseph, 137, Jan. 19, Folding and cutting paper.
— Joseph S., 918, Apr. 6, Type writing machines.

— P. J., 1716, July 3, Preventing bursting of water
[pipes, &c.

Davis, A., 3352, Dec. 11, Theatrical and fancy costumes.
— C., & Struthers, T., 2256, Aug. 28, Waterproofing,
[&c.

— E., 2765, Oct. 18, Axle-boxes.
— G. D., 891, Apr. 4, Working rudders.

— G. D., 2595, Oct. 2, Floating buoys, beacons, &c.
— G. D., & Hopcraft, W., 2046, Aug. 3, Working
[anchors.

— H., 2276, Aug. 30, Sash-frames and sashes.
— J., Ilbery, J. A., Isangk, B., & Sullivan, J., 1680,
[June 27, Recording pressure, &c., of gases, and
[liquids, and speed of machines.

— R., & Wilshaw, J., 1175, May 2, Mangles.
— S. M., & Morris, P., 3123, Nov. 18, Raising and
[holding timber.

— T., 3475, Dec. 22, Furnaces.
Davison, D. (*Newton*), 857, Mar. 30, Coal gas.

Davy, T., Turnpenny, W., & Atkinson, M., 2996, Nov. 7,
[Looms.

Dawes, W., 1321, May 16, Steam-engines.
Dawlings, R. (*Brough & Gilson*), 1406, May 25, De-
[colorising liquids and gases.

Daws, G., 765, Mar. 21, Railway signalling.
Dawson, J. W., 3468, Dec. 22, Burning fibres off fine
[yarns, &c.

— J. W., & Mason, S., 1948, July 25, Combing
[fibres.

— R., King, J., & Crofts, J., 1683, June 27,
[Combing fibres.

— S. (*Dawson*), 381, Feb. 15, Safety-valves.
Dawson, W. (*Dawson*), 381, Feb. 15, Safety-valves.

Day, A. G., 1010, Apr. 15, Elastic compounds.
— A. G., 1364, May 20, Insulating telegraph wires.

— C. A., & Howse, H., 3333, Dec. 9, Sewing-machines.
— St. J. V., 1627, June 21, Railway and tramway
[rolling stock.

— St. J. V. (*Masson & Hodgert*), 950, Apr. 11,
[Hydraulic presses.

— St. J. V. (*Campbell & Clark*), 1259, May 10,
[Traction-engines.

— St. J. V. (*Bender*), 1386, May 23, Refining sugar.
— St. J. V. (*Campbell & Clark*), 2051, Aug. 3,
[Tillage anchors.

— St. J. V. (*Campbell & Clark*), 2205, Aug. 22,
[Engine wheels.

Deacon, H., 691, Mar. 15, Bleaching powder, sulphate
[of soda, &c.

— H., 753, Mar. 20, Sulphuric acid.

- Deacon, H., 1682, June 27, Chlorine and sulphuric acid.
 — H., 1908, July 21, Sulphates of soda & potash;
 [chlorine, &c.]
 — H., 2667, Oct. 9, Sulphates of soda, &c.; chlorine.
 Deakin, W. & Hayes, J. T., 2213, Aug. 23, Tobacco pipes.
 Dean, J., & Horton, J., 1472, June 2, Cut nails & tacks.
 — T., & Stapfer, H., 942, Apr. 10, Filtering oils, &c.
 D'Argy, E. A. G. (Clark), 1727, July 3, Coffee-pots.
 — E. A. G. (Clark), 3109, Nov. 16, Wire gauze.
 Death, E., & Ellwood, J., 3120, Nov. 18, Scutching wheels.
 De Bergue, A. (*Dalman y Sala*), 1551, June 12, Sup-
 [plying water to steam-boilers].
 — A. & R., 1914, July 21, Veneer cutting
 [machines].
 — R. & A., 1914, July 21, Veneer cutting
 [machines].
 Deblon, A. J., 1702, June 30, Calendering stuffs.
 De Broca, F. (Hinchliff & Chapman), 1755, July 5,
 [Sights for ordnance and fire-arms].
 De Busson, E. (Haseltine), 126, Jan. 18, Table spoons.
 De Chastelain, C., 2567, Sep. 29, Treating sewage, &c.
 Decoudun, J. (Clark), 2791, Oct. 19, Condiment receptacle.
 Dee, H. W., 863, Mar. 31, Securing spring catches of
 [boxes, &c.]
 Deffis, T. (*Mauger*), 2496, Sep. 22, Glass lights.
 De Forville, E. V. (Newton), 3281, Dec. 5, Bicycles or
 [velocipedes].
 De Gonzalo, L. L., & Grisei, S. (Brandon), 1815, July 12,
 [Ships' mattresses, &c.]
 De Grandchamp, P. P., 1602, June 17, Jacquard ap-
 [paratus and cards].
 D'Humy, P. R. F., 3041, Nov. 10, Cleansing docks,
 [basins, &c.]
 Dejeu, J., 2073, Aug. 5, Emery cloth and glass paper.
 De Kierzkowski, C. F., 193, Jan. 25, "Buffing," and
 [coupling gear, &c., of railways].
 De Laharpe, C. D., & Fouche, F. H. F. M. (Tongue),
 [2006, July 31, Steam boilers].
 De Lalaude, F., & Schützenberger, P., 3377, Dec. 13,
 [Indigo printing and dyeing].
 De Langlade, J. E. A. B. (Johnson), 2081, Aug. 7,
 [Utilizing gases from blast furnaces].
 De la Peyrouse, L. L. A. E. P., 2260, Aug. 28, Treating
 [fatty matters].
 De Laterrière, J. A. M. (Henry), 464, Feb. 22, Bedsteads.
 Delavigne, N. A., 984, Apr. 13, Bottle stoppers.
 De Lobstein, E. E., 2623, Oct. 4, Coating and ornament-
 [ing metals].
 Delsarte, A. C. L. (White), 2562, Sep. 28, Pendulum or
 [balance-weight levels].
 Demailly, G., 1863, July 17, Obtaining fibres.
 — G., 2635, Oct. 5, Disaggregating textile plants,
 [&c.]
 Demarest, J., & Mott, J. L. (Clark), 1105, Apr. 26,
 [Moulds and cores].
 De Mercader, E., & De Terré, A. (Watteen), 2715, Oct. 13,
 [Explosives].
 Dempster, R. (*Tison*), 1922, July 21, Hasps or latches.
 Denais, J. B. (Johnson), 3153, Nov. 21, Filtering, &c.,
 [water].
 De Navarro, J. F. (Newton), 184, Jan. 24, Liquid-meters.
 — J. F. (Newton), 869, Mar. 31, Fluid-meters.
 — J. F. (Newton), 1227, May 6, Liquid-meters.
 Dence, J. (*Martorelli*), 3384, Dec. 14, Railway carriages.
 Dendy, J., & Taylor, A., 2560, Sep. 28, Jacquard ap-
 [paratus].
 De Negri, C., 2019, Aug. 1, Paper-pulp.
 — C., & Craddock, E., 557, Mar. 2, Expressing
 [oils, &c.]
 Denempont, C. D. & C. S., 2333, Sep. 4, Shaping wood.
 — C. S. & C. D., 2333, Sep. 4, Shaping wood.
 Denis, G. (Lake), 1907, July 20, Governors.
 Denne, T. J., & Hentschel, A., 730, Mar. 18, Preparing
 [surfaces for prints, printing, &c.]
 De Normann, J. (Downing), 3117, Nov. 17, Screw-
 [propellers].
 Densmore, E. (Newton), 3177, Nov. 23, Type-printing.
 Denton, H., 2981, Nov. 6, Rakes for reaping machines.
 Depouilly, C., & Casthelaz, J., 1879, July 19, Finishing
 [yarns, &c.]
 Dérégnaucourt, A. (Gedge), 3122, Nov. 18, Cutting
 [leather, &c.]
 Derogy, E. E. N. (Johnson), 1852, July 14, Spectacles, &c.
 Dervieux, J. B. (Clark), 1396, May 24, Strainers.
 Desbarats, G. E., & Leggo, W. A. (Gilbee), 1409, May 25,
 [Photography].
 Descamps, E. C., & Breh, F. S., 941, Apr. 10, Building
 [blocks].
 Deschamps, L. O., & Oudit, S. D. (Smith), 2015,
 [July 31, Cutting threads of net, &c.]
 Desgoffe, J. A., 3170, Nov. 23, Telegraphic and signal
 [posts, &c.]
 De Terré, A., & De Mercader, E. (Watteen), 2715,
 [Oct. 13, Explosives].
 De Usera, G., & Goujet, A. (Abel), 2258, Aug. 28,
 [Furnace grates].
 De Vauréal, C. J. F. R. de J. (Henry), 2413, Sep. 13,
 [Desilvering lead].
 Deverell, S. R. (Lake), 1083, Apr. 24, Utilizing wave
 [power].
 Devillaine, M. M. F. (Gedge), 2580, Sep. 29, Screening.
 Devlan, P. S., Wendell, I. P., & Tasher, S. P. M. (Lake),
 [142, Jan. 19, Telegraph cables].
 Dew, B., 337, Feb. 9, Milanese or floss cord.
 Dewar, J., 778, Mar. 22, Treating substances for food, &c.
 — W., 1758, July 5, Digging up roots.
 De Wolfe, A. G. (Lake), 2106, Aug. 10, Covering wire.
 De Zuccato, E., 2883, Oct. 27, Making and copying
 [drawings, &c.]
 Dick, A. B., 2779, Oct. 18, Combined shirt front and scarf.
 Dickes, W. J., 649, Mar. 11, Envelopes.
 Dickinson, A. P., 1262, May 10, Preparing, &c. yarn.
 — W., & Parkinson, W., 1414, May 26, Beaming
 [and sizing yarn].
 Dickson, J., 1734, July 4, Harrows.
 — J. H., 710, Mar. 16, Obtaining fibres from
 [plants].
 Dietrichson, L., 2476, Sep. 20, Safety hoist and portable
 [scaffold].
 Dilkes, J., & Goldsmith, G., 2063, Aug. 4, Heating by gas.
 Dillon, C. A., & Frazer, J., 3435, Dec. 19, Campbedsteads.
 Dilnutt, W. H., & Knowelden, J., 3101, Nov. 16, Furnaces.
 Ditchfield, W., & Belicard, J., 57, Jan. 10, Looms.
 Di Tergolina, Count V., 2499, Sep. 22, Horses' "bits."
 Dixon, A. S., 1741, July 4, Gauge cocks.
 Dixon, J. (Schlesinger), 1728, July 3, Mixer for edible
 [compounds].
 — J. (Schlesinger), 1739, July 4, Soup dishes.
 Doble, J. W., 1077, Apr. 24, Utilizing bye-products of ores.
 Dobson, B., & Macqueen, J., 2037, Aug. 2, Spinning and
 [doubling].
 Dodds, T. W., 627, Mar. 9, Locomotive engines.
 Dodge, J., 3147, Nov. 21, Steam-boilers and engines.
 Dodge, P. T. & W. C. (Lake), 755, Mar. 20, Fire-arms.
 — W. C. & P. T. (Lake), 755, Mar. 20, Fire-arms.
 Dodgeon, E., 2532, Sep. 25, Mats.
 — J., & Baldwin, B., 2307, Sep. 1, Looms.
 Doeg, G. W., 544, Mar. 1, Giving rotary motion to shafts.
 Dolby, T. G. F., 3299, Dec. 7, Attaching watch chains.
 Donald, A., & Atkey, A. J., 1302, May 15, Pulverising
 [steam hammers].
 — J. F., & Smith, P., 805, Mar. 24, Finishing fabrics.
 Donbavand, D., W. & T., 1298, May 13, Weighing-
 [machines].

Denbavand, T., D. & W., 1298, May 13, Weighing-
[machines.
—— W., T. & D., 1298, May 13, Weighing-
[machines.
Dormoy, P. A., 1967, July 27, Steel and iron.
Dorrell, J., & Rudge, J. F., 1431, May 29, Slabbing and
[blooming iron.
Dotch, J. E. (Symons), 2923, Oct. 31, Soaps, ointments,
[washes, &c.
Douglas, C., & Watson, D. M., 2158, Aug. 16, Treating
[stone, wood, &c.
—— J., 1892, July 19, Heating buildings.
—— J. M., 507, Feb. 25, Oils, tallow, soap, &c.
—— R., & Grant, L., 3044, Nov. 10, Using grain
[husks as fuel.
Douglass, D. A., & Williams, H. M. & S. M. (Clark),
[2414, Sep. 14, Spinning.
Douglass, J. N., 792, Mar. 23, Lighthouse & other lamps.
—— J. N., 2686, Oct. 10, Lighthouse & other lamps.
Dover, R., 804, Mar. 24, Intercepting & utilising sewage.
Downes, A. A., 208, Jan. 26, Earrings.
—— J., 625, Mar. 9, Metallic bale-hoops.
Downing, G. (De Normann), 3117, Nov. 17, Screw-
[propellers.
Dowson, A. & J. E., 1488, June 5, Tramways & railways.
—— J. E. & A., 1488, June 5, Tramways & railways.
Draper, G. & W. F., & Booth, J. B., 737, Mar. 18,
[Spinning, doubling, &c.
—— H. V. P. (Newton), 794, Mar. 23, Fibre for
[paper, &c.
—— W. F. & G., & Booth, J. B., 737, Mar. 18,
[Spinning, doubling, &c.
Dresser, H. E., Harris, M. M., & Brady, Sir A. (Wash-
[burn), 2788, Oct. 19, Couplings.
Drew, T. H., 2464, Sep. 19, Clipping horses, &c.
Dreyscharff, P. R., 2337, Sep. 5, Spinning mules.
Driggs, W. S., & Rice, N. B. (Clark), 1009, Apr. 15,
[Treating bone, horn pith, &c.
Dronsfield, J. S., 2474, Sep. 20, Grinding cards of card-
[ing-engines.
Drouyer, J. M., 1097, Apr. 26, Mincing machines.
Drown, W. A. (Johnson), 633, Mar. 9, Sewing um-
[brellas, &c.
Drummond, G. A. (Paterson), 2202, Aug. 22, Sugar.
Dubois, A. (Clark), 3152, Nov. 21, Travelling garments.
—— C. (Clark), 2222, Aug. 24, Preserving iron
[surfaces.
—— G., & Francois, J. (Watteu), 3004, Nov. 8,
[Driving holes in rocks.
Duché, J. (Virollet), 1988, July 28, Water-feeding
[boilers.
Duckham, H. A. F., 1210, May 4, Supplying gas to
[burners.
Ducommun, L., 1766, July 6, Winder for musical
[boxes, &c.
Dudley, R., Gaggin, R. F., Hershey, B., & Geer, E.
[Lake), 2467, Sep. 19, Torsion springs
[and their bearings.
Duff, C., 519, Feb. 27, Treating fibres for paper-pulp.
Duffee, E., 2795, Oct. 19, Screens for gas purifiers.
Dujour, E., & Couppe, F. (Gedge), 1645, June 22,
[Comfits or sugar plums.
Duley, E., & Marriott, E., 1979, July 27, Ordnance;
[casting projectiles.
Du Motay, C. M. T. (Smith), 470, Feb. 22, Chlorine.
—— C. M. T. (Smith), 491, Feb. 24, Ammonia.
—— C. M. T. (Smith), 1725, July 3, Recovering
[potash, &c.
—— C. M. T. (Smith), 2231, Aug. 25, Ammonia.
—— C. M. T. (Smith), 2232, Aug. 25, Chlorine
[and hypochlorites.
Dunbar, J., 3231, Nov. 29, Screwed bushes for casks.

Duncan, Alexander, 62, Jan. 10, Hoisting and lowering
[ships' yards.
—— Alexander C. & A., 2735, Oct. 14, Madder dyeing.
—— Archibald & A. C., 2735, Oct. 14, Madder dyeing.
—— G., & Wilson, W. A., 3047, Nov. 11, Printing
[H., 1319, May 16, Tobacco pipes.
—— J., & Robertson, R. A., 3197, Nov. 25, Reburning
[charcoal.
—— J., & Stenhouse, J., 1235, May 6, Sugar.
—— J., & Stenhouse, J., 1619, June, 20, Sugar; treat-
[ing saccharine solutions.
—— J., Newlands, J. A. R. & B. E. R., 2090, Aug. 8,
[Sugar.
Duncan, W. & Rowell, C. C. Haseltine), 3108, Nov. 16,
[Alarm for safes.
Dunham, W. (Hughes), 3476, Dec. 22, Reels for dressing
[flour.
Dunk, A. A. (Johnson), 2300, Aug. 31, Multiple color
[printing.
Dunkerley, B., & Eaton, R., 1047, Apr. 21, Stretching hat
[bodies.
Dunkley, J., 576, Mar. 3, Sewers.
Dunlop, D. J., 852, Mar. 30, Governing screw-propeller
[engines.
—— H. W. D., 945, Apr. 10, Arranging words, &c.
[alphabetically,
Dunn, H. S., 2748, Oct. 17, Boring & winding machines.
—— P., & Spence, J. B., 1136, Apr. 28, Manure.
—— P., & Spence, J. B., 1589, June 15, Phosphates
[of alumina, &c.
—— T., 3005, Nov. 8, Building & preserving houses, &c.
Dupas, A. E. (Haseltine), 475, Feb. 23, Gas-burners.
—— A. E., & Barbarin, A. (Haseltine), 452, Feb. 21,
[Carburetted air.
—— A. E., & Barbarin, A. (Haseltine), 472, Feb. 22,
[Carburetted air.
Durand, F., 460, Feb. 22, Treating shrimps, &c., for pre-
[serving.
—— J., 2010, July 31, Buttons or fastenings.
Durant, E. G. (Tucker & Snell), 262, Jan. 31, Sharpening
[saws.
Durfee, Z. S. (Abel), 2740, Oct. 16, Iron and steel; metal
[alloys.
Durham, J. D., 3038, Nov. 10, Cocking apparatus.
Du Rieux, E. J. J. B. D. & Roettger, C. E. (Brooks),
[2378, Sep. 8, Filtering presses.
Duterne, V. (Watteu), 3168, Nov. 23, Stuffing boxes.
Dutton, S. T., 2098, Aug. 9, Working points, &c., of
[railways.
Du Vallon, J. C. G., 1951, July 25, Punches.
Duxbury, W., 988, Apr. 14, Locking & signalling on
[railways, &c.
Dyer, E. (Lake), 1510, June 7, Stamping metallic
[articles, &c.
—— E. (Lake), 1520, June 8, Binding and securing
[papers, &c.
Dyer, H. W., 275, Feb. 1, Fixing chairs on sleepers.
Dykes, J., 663, Mar. 13, Propelling ships.

E.

Eades, W. & W. T., 2999, Nov. 7, Pulley blocks or hoists.
—— W. T. & W., 2999, Nov. 7, Pulley blocks or hoists.
Eagles, W., 926, Apr. 8, Syruping or measuring machine.
Eassie, W., & Wanklyn, J. A., 1801, July 10, Preserving
[milk.
Eastham, R., & Quin, J., 44, Jan. 9, Railway signals.

- Eastham, R., & Quin, J., 356, Feb. 11, Hose and similar [piping].
 Eastman, R., 1870, July 18, Casters and anti-friction [rollers].
 Eastwood, T. C., 2518, Sep. 23, Combing fibres, &c.
 ——— T. C., & Little, G., 1297, May, 13, Combing [machinery].
 Eaton, H., 1841, July 14, Coke ovens.
 Eaton, Ralph, & Dunkerley, B., 1047, Apr. 21, Stretching [hat bodies].
 Eaton, Richard (Lake), 2403, Sep. 12, Iron and steel.
 Ebdy, T. C., 3297, Dec. 7, Stoves.
 Eccles, J., 335, Feb. 9, Looms.
 Eckersley, J., & Davies, B., 2629, Oct. 4, Rotary furnaces.
 Edard, G. & Bazault, J. E. (Brewer), 1947, July 25, [Belts to prevent sea-sickness, &c].
 Eddy, R. H., 1548, June 12, Bretelles or pantaloons suspenders.
 Edgcome, T. L. B., 2964, Nov. 4, Earth closets and urinals.
 Edge, J., 2268, Aug. 29, Steam boilers; fuel economizers.
 Edlington, J. B. & T., 3433, Dec. 19, Smutting & cleaning grain.
 ——— T. & J. B., 3483, Dec. 19, Smutting & cleaning grain.
 Edmondson, F. W., J. & W., 1828, July 12, Etching and [engraving cylinders, &c].
 ——— J., W. & F. W., 1828, July 12, Etching and [engraving cylinders, &c].
 ——— W., F. W. & J., 1828, July 12, Etching and [engraving cylinders, &c].
 Edwards, B. J., 622, Mar. 8, Photography.
 Edwards, D. (Pritchard), 1904, July 20, Land scari-fiers, &c.
 Edwards, Edmund, 1802, July 10, Mixing and kneading.
 ——— Edmund (Brodie), 1764, July 6, Bale-ties.
 ——— Edmund (Tarr), 2582, Sep. 29, Condensing [metals].
 ——— Ernest, 2799, Oct. 20, Photo-mechanical print-ing, &c.
 ——— Eyre B. & W. H., 1258, [May 10, Watering & [sweeping roads].
 ——— F. H., 672, Mar. 14, Preventing smoke.
 ——— G., 761, Mar. 21, Pencil cases, pen-holders,
 ——— G. W. B., 2904, Oct. 30, Corn and seed drills.
 ——— J., 2018, Aug. 1, Permanent way of railways.
 ——— R. J., 2982, Nov. 6, Emery, &c., combined with [woven fabrics & applying same].
 ——— T., & Morris, T., 1890, July 19, Fog and [danger signals].
 ——— W., 1196, May 3, Edge tools.
 ——— W. H. & E. B., 1258, May 10, Watering and [sweeping roads].
 Egan, A. (Simon), 3141, Nov. 21, Metallic springs.
 Ehrhard, H. (Budenberg), 595, Mar. 6, Pumps.
 Ekman, P. J., 2074, Aug. 5, Window-sashes and frames.
 Elce, J., & Macpherson, W., 3425, Dec. 18, Clearer for [carding-engines].
 Elers, C. G., & Barrett, H., 3484, Dec. 23, Bottle-stoppers.
 Eley, A., 3181, Nov. 24, Miners' lamps.
 Eli, A., & Pilgrim, E., 1588, June, 15, Stopping bottles, [&c., drawing off liquids].
 —, A. J., 3401, Dec. 15, Stopping bottles, &c., drawing off [liquids].
 Elliott, G. W., 2730, Oct. 14, Bricks.
 ——— G. W., 2822, Oct. 21, Sewing machines.
 ——— T. A., 2375, Sep. 8, Ships or vessels.
 ——— T. A., 2520, Sep. 23, Reefing and furling sails.
 Ellis, G. H., 322, Feb. 7, Boots and shoes.
 ——— G. H., 488, Feb. 24, Railway rails.
 ——— G. H., 1799, July 10, Garden and field rollers.
 ——— G. H., 2990, Nov. 7, Asphalte roads; pavements.
 ——— G. H., 3383, Dec. 14, Asphalte roads, &c.
 Ellis, G. H., & Aubertin, N. A., 1213, May 5, Printing, [copying, &c].
 ——— G. H., & Gilbert, G., 52, Jan. 10, Plates for boots, [and shoes].
 ——— H. D., & Austin, W., 3219, Nov. 28, Paving blocks.
 Ellis, J. A. H. (Clark), 261, Jan. 31, Vapour-engines.
 Ellis, J. R., Rollason, J. G., & Morley, A. E., 1182, May 3, [Lockets, &c].
 ——— R., 1176, May 2, Boot and shoe heels.
 ——— T. A., & Gilbert, G., 169, Jan. 23, Railway rails.
 ——— W. L., 2626, Oct. 4, Forcing & exhausting air, &c.
 Ellisdon, J., 1051, Apr. 21, Canopies for omnibuses, &c.,
 Ellwood, J., & Death, E., 3120, Nov. 18, Scutching wheels.
 Elmer, C. D. (Newton), 1339, May 18, Gas.
 ——— W. (Newton), 3379, Dec. 13, Generating gases.
 Elsdon, J. F., & Stiles, E. C., 500, Feb. 25, Dressing mill [stones].
 Elaner, S., 1443, May 31, Signal lamps.
 Elton, F. E., & Chambers, J. W., 302, Feb. 4, Artificial [fuel].
 Emerson, J. E. (Holmes), 2706, Oct. 12, Saw teeth.
 Emmens, S. H., 2188, Aug. 19, Artificial stone.
 ——— S. H., 2738, Oct. 16, Asphalte roads.
 ——— S. H., 3130, Nov. 18, Purifying distillates.
 Emmott, J., 1134, Apr. 28, Wool combing.
 English, S. R., 1750, July 5, Sash fastenings.
 ——— T., 3211, Nov. 28, Screw-bolts and nuts.
 ——— T., & Wilson, G., 1465, June 1, Bending armour [plates].
 Ensinger, G. W., Nimmo, A., Moran, T. & Stausse, V. [(Johnson), 2174, Aug. 18, Looms; trans-mitting motion].
 Ensom, V. F., Spence, G., & Kirkham, T. N., 645, Mar. 10, [Scouring, bleaching and dyeing fibres].
 Entwistle, E., 3355, Dec. 12, Railway signals.
 ——— E., Kenyon, J. H. & J., 14 Jan., 4, Railway [signals].
 ——— E., & Raw, J., 1236, May 8, Railway signals.
 ——— T., Heyes, G., & Cummings, E. H., 1119, Apr. 27, [Warping machines].
 Erck, J., Found, G., & Watson, H., 2312, Sep. 2, Motive [power].
 Erichsen, J. (Jensen), 1690, June 28, Materials for [roofing].
 Ermen, G., 1593, June 16, Polishing and finishing yarn [and thread].
 ——— G. A., 1790, July 8, Fire arms and ordnance.
 Erskine, F., & Harrop, J., 960, Apr. 12, Chaff cutting [machines].
 Eskholme, G., 654, Mar. 11, Water-closets.
 ——— G., & Morris, W., 249, Jan. 30, Regulating, &c. [water-supply].
 Esplen, W., & Wilke, H., 342, Feb. 9, Safety-valves.
 Esal, J., & Quin, G., 1934, July 22, Oil lamps.
 Eason, J., 680, Mar. 14, Chases for type formes.
 ——— J., & Parker, A. J., 430, Feb. 17, Printing-presses.
 Evans, F. J., 1857, July 15, Purifying gas.
 ——— G., 3357, Dec. 12, Paving composition.
 ——— John, 3112, Nov. 17, Supporting beds, &c. on [board ship].
 ——— John C., 2619, Oct. 4, Artificial bristles or hair.
 ——— Joseph & W., 1576, June 14, Pumping machinery.
 ——— P. C., 2886, Oct. 27, Lighting and heating
 ——— P. C., & Mines, H. E., 387, Feb. 15, Improving [combustion, &c].
 ——— W., & Fox, H. B., 836, Mar. 29, Tramway cars [and track clearers].
 ——— W. & J., 1576, June 14, Pumping machinery.
 Eveleigh, G., 443, Feb. 21, Gas.
 ——— G., 3348, Dec. 11, Purifying gas.
 Evered, R. B., 3245, Nov. 30, Taps or valves.
 Everick, C. J. (Mills), 3059, Nov. 13, Folding chairs, &c.

Everitt, W. E., 2020, Aug. 1, Tubes for steam-engines.
 Eyth, M., & Greig, D., 980, Apr. 13, Traction-engines.
 Eyton, W. C., 748, Mar. 20, Gas-burners; measuring, &c.
 [fluid pressure.
 — W. C., 812, Mar. 25, Spinning and testing wire
 [and ropes.
 — W. C., 1028, Apr. 19, Drying hides, &c.
 — W. C., 1430, May, 29, Grinding mills.

F.

Fahlman, F. J., 1269, May 11, Disinfecting sewage.
 — F. J., 3233, Nov. 29, Disinfecting sewage, &c.
 Fairbairn, C., 2979, Nov. 6, Making bolts.
 — C., 3497, Dec. 27, Guiding tram & railway
 [vehicles.
 Fairburn, E., 1237, May 8, Condensing wool, &c.
 Fairlie, R. F., 803, Mar. 24, Locomotive engines.
 — R. F., 2043, Aug. 2, Coupling, &c., railway car-
 [riages, &c.
 — R. F., 2725, Oct. 14, Waste cocks of engine
 [cylinders.
 Fairman, J. (Smith), 1013, Apr. 17, Stretching picture-
 [frames, &c.
 Farmer, G. P., & Hatcher, J. J. (Pratt), 1861, July 17,
 [Buttons.
 Farmer, J., 3013, Nov. 8, India-rubber squeezing
 [rollers.
 Farrel, J., 1761, July 6, Fire & burglar proof safes.
 Farrell, I., 317, Feb. 7, Tiles.
 Farwell, W. B., 3385, Dec. 14, Watch protectors.
 Favieres, M. G. R. Comte de, 3223, Nov. 29, Preparing
 [colours.
 Fawcett, T., 1595, June 16, Sawing and boring timber, &c.
 — T., & Coulter, J., 3461, Dec. 21, Engine governors.
 — T. C., & Shackleton, W. M., 269, Feb. 1, Mould-
 [ing clay, &c.
 Fearn, T., 2266, Aug. 29, Depositing alloys by electricity.
 Feldtmann, E. (Gehrckens), 692, Mar. 15, Packing.
 Fell, J. B., 1, Jan. 2, Engines for narrow gauge railways.
 — J. B., 1246, May 9, Narrow gauge railways, &c.
 Fennell, T. J., 3110, Nov. 17, Domestic fire-escape.
 Fennelly, R., 526, Feb. 27, Preserving animal substances.
 Fenner, H. J., & Versmann, F., 3486, Dec. 23, An-
 [thraxene.
 Fensom, J. (Spence), 3239, Nov. 30, Turning tools.
 Fenton, F., 1897, July 20, Purifying & utilizing sewage, &c.
 — J., & Lord J. & W., 709, Mar. 16, Spinning
 [cotton waste, &c.
 Firaud, E., & Baqué, B. (Clark), 2451, Sep. 16, Cocks
 [or valves.
 Ferguson, J. H., & Crossman, C., 98, Jan. 14, Attaching
 [shoes to horses.
 — J. H., & Crossman, C., 1654, June 23, Horse-
 [shoes.
 Fern, W., 3424, Dec. 18, Decarbonizing smoke, &c.
 Fernley, G. A., 12, Jan. 3, Steam-boilers.
 Férou-Flament, A. (Hunt), 584, Mar. 4, Washing wool, &c.
 Ferrie, R., & Murray, J., 2893, Oct. 28, Dyeing.
 — W., 2088, Aug. 8, Puddling furnaces.
 Fessey, D. W., 1946, July 24, Connecting heels to boots
 [and shoes.
 Ffrench, E. (Madge), 176, Jan. 23, Circulating liquids.
 Field, A., 122, Jan. 18, Candles.
 — A., 1763, July 6, Candles.
 — E., 870, Apr. 1, Preventing incrustation.
 — E., & Olrick, L., 1043, Apr. 20, Safety-valves.
 Field, G. B., & Andrews, E. W. (Lake), 1400, May 24,
 [Telegraphs.
 Field, J. L., & Cotton, F. M., 3078, Nov. 15, Candlesticks.

Finch, J. H., 186, Jan. 25, School desks.
 Finlayson, C., 2141, Aug. 15, Tension pulleys for blinds.
 Finley, W., 1173, May 2, Extinguishing fire.
 Finney, J., 2340, Sep. 5, Motive-power engine governors.
 Firth, F. J., McIlvaine, C., & Lloyd, W. McC. (Lake),
 [689, Mar. 15, Printers' ink.
 Firth, W., 1268, May 11, Elastic wheel tyres.
 Fish, W. S. (Johnson), 897, Apr. 4, Packings for
 [pistons, &c.
 Fisher, C. G., Brecht, T. C., Brandt, J., & Lehr, R.
 [(Lake), 1327, May 16, Steam-engines.
 Fisher, H., 1205, May 4, Wardrobes.
 — J. M., 1500, June 6, Protecting crops from
 [birds, &c.
 Fiskien, T. R. H., 554, Mar. 2, Windlass for steam culti-
 [vation.
 — T. R. H., 1330, May 17, Steering ships.
 — T. R. H., 1614, June 20, Imparting motion to
 [rollers, &c.
 Fitts, B. (Lake), 549, Mar. 1, Regulating steam pressure
 [in drying, &c.
 — R. B. (Newton), 2146, Aug. 15, Preparing grain
 [for food.
 Fitz-Maurice, Hon. J. T., 409, Feb. 16, Guns and cart-
 [ridges.
 — Hon. J. T., 1457, June 1, Adjustable tables.
 Flack, F., 2898, Oct. 28, Punching & clipping tickets.
 — J., 784, Mar. 22, Blotting pad, writing portfolio, &c.
 Flament, A. Férou- (Hunt), 584, Mar. 4, Washing wool, &c.
 Fleming, A., Rawcliffe, J., & Bibby, W., 1731, July 4,
 [Mules for spinning.
 — A. B., MacLagan, R. C., & Irvine, R., 2196,
 [Aug. 21, Lubricants for wool.
 — A. B., Turnbull, G. V., Salvesen, C., Irvine, R.,
 [& MacLagan, R. C., 1451, May 31, Lubricants
 [for wool.
 — P., 1397, May 24, Railway breaks.
 Fletcher, A. E., 423, Feb. 17, Measuring speed of ships, &c.
 — G., & Brough, J., 1777, July 7, Vacuum pans.
 — H., 2732, Oct. 14, Wheels for vehicles.
 — J., 2383, Sep. 9, Packing rings for piston
 [rods, &c.
 — J., & Brooks, E., 1276, May 12, Weaving tows.
 Fleury, F. G., 1008, Apr. 15, Flowing liquid meters.
 — F. G. & Hosken, J., 2047, Aug. 3, Water-waste
 [prevents.
 Fleury, J. S., & André, O. (Touaillon), 3199, Nov. 25, Cast
 [iron bars.
 Florence Manufacturing Co. (Livsey), 1304, May 15,
 [Mirrors.
 Flower, J., 2694, Oct. 11, Smiths' forges.
 Fogelberg, C. (Brandon), 3086, Nov. 15, Musical instru-
 [ments.
 Fogerty, V. (Brandon), 3483, Dec. 23, Water-meters &
 [motors.
 Folacci, P. (Smith), 2493, Sep. 21, Waggon, vans, &c.
 — P. & Lamie, E. (Smith), 2395, Sep. 11, Motive-
 [power.
 Foote, T. M., & Randall, C. A. (Lake), 1474, June 2,
 [Telegraphic printing.
 Forbes, D. & P., 1260, May 10, Wringing-machines.
 Forbes, G. F., & Gordon, J., 431, Feb. 17, Separating
 [fibres.
 — J. (Barber), 1212, May 5, Bending metals.
 Forbes, P. & D., 1260, May 10, Wringing-machines.
 Ford, A., 2311, Sep. 2, Treating vegetable oils.
 — R., 408, Feb. 16, Bird and other cages.
 Fordred, J., 858, Mar. 30, Refining paraffine, & sper-
 [maceti.
 — J., 1917, July 21, Treating and purifying yeast.
 Forman, J. R., 1040, Apr. 20, Valve boxes of presser &
 [pumps.

Forster, T. A. D. (Johnson), 3178, Nov. 23, Artificial dentures.
Fortoul, L., 3249, Dec. 1, Treating fatty matters.
Forville, E. V. de (Newton), 3281, Dec. 5, Bicycles or velocipedes.
Foster, F., 466, Feb. 22, Bottles and stoppers.
Foster, James H., & Abbey, F. J. (Green), 929, Apr. 8, Fire-arms.
 — *James H., & Abbey, F. J.* (Green), 2522, Sep. 23, Fire-arms.
Foster, John, 1623, June 20, Carding fibres.
 — *Joseph, & Bond, W.*, 774, Mar. 22, Printing machines.
 — *Joseph, & Bond, W.*, 3237, Nov. 30, Printing machines.
 — *W., & Whitehead, J.*, 3410, Dec. 16, Hydraulic mains.
Fothergill-Cooke, Sir W., 2313, Sep. 2, Working railway trains.
Fouché, F. H. F. M., & De Laharpe, C. D. (Tongue), 2006, July 31, Steam-boilers.
Foulger, E., 136, Jan. 19, Railway guide wheels, &c.
Found, G., Watson, H., & Erck, J., 2312, Sep. 2, Motive-power.
Fouque, P. M. (Tongue), 1180, May 2, Cartridges.
Foveaux, H. J. F. H., 359, Feb. 13, Automatic valves.
Fowell, G. J., & Burrell, C., 3105, Nov. 16, Elastic wheel tyres.
Fowke, G. A. F., 1621, June 20, Wire fencing.
Fox, H. B., 1435, May 30, Milk skimmer.
 — *H. B., & Evans, W.*, 836, Mar. 29, Tramway cars and track clearers.
 — *S., Tannett, J. T., & Craven, J.*, 1108, Apr. 27, Hoisting cranes.
Francis, W., & Bayley, J. & T., 1225, May 5, Tanning.
Francois, J., & Dubois, G. (Watteu), 3004, Nov. 8, Driving holes in rocks.
Frankenstein, P., & Phillips, S., 1613, June 20, Fastenings of leggings, &c.
Franklin, A. C. F. & J. A., 457, Feb. 22, Steam-engines.
 — *J. A. & A. C. F.*, 457, Feb. 22, Steam-engines.
Franks, J. J., 1577, June 14, Iron rails for fencing.
 — *J. J.*, 1899, July 12, Flushing urinals and water-closets.
Fraser, J., & Dillon, C. A., 3435, Dec. 19, Camp bedsteads.
Freeman, T., 882, Apr. 3, Fastenings for wearing apparel.
French, A. (Johnson), 2668, Oct. 9, Lanterns; attaching glass vessels.
Frewer, R., 887, Apr. 3, Boring and drilling wood, &c.
Freystadt, A., 3267, Dec. 4, Hats, caps, &c.
Friedmann, A., 2750, Oct. 17, Boiler injectors.
Frizac, A. (Sicinoski), 697, Mar. 16, Forges.
Frost, M. S., & Paine, H. M. (Newton), 1361, May 20, Electro-magnetic engines.
Fry, J. W., & Childs, D. M. & A. B., 2105, Aug. 10, Dressing, &c. millstones.
Fryer, D., & Steers, R., 2432, Sep. 15, Hand vices, screw wrenches, &c.
 — *D., & Steers, R.*, 2458, Sep. 18, Roughing horses, &c.
Fullwood, E., & Tibbitts, A., 1783, July 7, Paving, &c.
Funck, G. H. (*Meissner, Achermann & Co.*), 237, Jan. 30, Vessels for oils, &c.
Furlong, C. H., 2484, Sep. 21, Treating casks, barrels, &c.
Furlonge, W. H., & Churchill, J. D., 46, Jan. 9, Alkali furnaces.
Furness, H. D., 2437, Sep. 15, Lubricating engine cylinders, &c.
 — *J. P.*, 2641, Oct. 5, Reaping & mowing machines.

G.

Gaensly, H., & Rueger, J. G. (Clark), 2199, Aug. 21, Box-irons.
Gaggin, R. F., Hershey, B., Geer, E., & Dudley, R. (Lake), 2467, Sep. 19, Torsion springs and their bearings.
Gale, W. J., & Boyden, W. W., 3376, Dec. 13, Utilizing waste leather.
Galland, C. (*Muratori*), 3227, Nov. 29, Leather-cloth.
Galloway, C. J., & Beckwith, J. H., 247, Jan. 30, Valves.
 — *G. B.*, 1628, June 21, Homogeneous metal.
 — *G. B.*, 1757, July 5, Roads and paths.
 — *G. B.*, 1958, July 26, Motive-power.
 — *M. P.*, 583, Mar. 4, Tube-cleaners.
 — *W.*, 1347, May 19, Sewing-machines.
 — *W.*, 2958, Nov. 3, Sewing-machines.
Gamgee, J., 1189, May 3, Producing cold.
Gard, B. M. & E. R. (Lake), 70, Jan. 11, Moulding bricks.
 — *E. R. & B. M.* (Lake), 70, Jan. 11, Moulding bricks.
Gardner, A., & Simpson, W., 3304, Dec. 7, Steam and other engines.
 — *C. H.* (*Mauger*), 2350, Sep. 6, Printing presses.
 — *C. H.* (*Mauger*), 2358, Sep. 6, Printing presses.
 — *C. H.* (*Mauger*), 2486, Sep. 21, Holding parcels, &c.
 — *C. H.* (*Mauger*), 2488, Sep. 21, Composing type, &c.
Gardner, F. A., & Turrell, H. S. (Benson), 332, Feb. 8, Casters.
Gardner, H., Lowe, R., Pickering, J., & Wood, J. & J., 276, Feb. 1, Spring mattresses, &c.
 — *H., Lowe, R., Wood, J. & J., & Pickering, J.*, 1249, May 9, Bedsteads, mattresses, &c.
Garfield, W. H., 1250, May 9, Tea-pots, coffee-pots, &c.
Gariel, M. (Hunt), 1895, July 20, Inkholders.
Garnett, W., 1360, May 20, Saddles.
Garnier, F., 2864, Oct. 25, Guns, cylinders, &c.
Garrard, G. M., & Murray, G. W., 2739, Oct. 16, Tilling land.
Garrett, C. B., 3235, Nov. 30, Administering ozone gas.
 — *F., R. & H. N.* (*Kotzo*), 3084, Nov. 15, Steam-engines.
 — *H. N., F. & R.* (*Kotzo*), 3084, Nov. 15, Steam-engines.
 — *R., H. N. & F.* (*Kotzo*), 3084, Nov. 15, Steam-engines.
Garrick, T. (Lake), 2699, Oct. 11, Household implement.
Garton, W., 1232, May 6, Brewing saccharum.
Gaskell, P. Penn., 565, Mar. 2, Cutting drains or trenches.
Gassett, E. (Lake), 2439, Sep. 15, Electro-magnetic engines.
Gates, J. (Lake), 2214, Aug. 23, Looms.
 — *P. W.* (Newton), 749, Mar. 20, Fastening, &c. window sashes.
Gatling, R. J. (Clark), 2954, Nov. 3, Revolving guns.
Gaudefroy, C. (Gedge), 2545, Sep. 27, Anti-radiating felt.
Gaukroger, J., & Handley, J., 34, Jan. 6, Furnaces.
Gauldie, J. D., 3229, Nov. 29, Regulating speed of engines.
Gaunt, E., & Hudson, J. G., 3276, Dec. 5, Hats.
 — *R.*, 3129, Aug. 12, Hinges.
 — *R.*, 2251, Aug. 28, Nails and screws.
Gautier, F. C., 482, Feb. 23, Looms.
Gedge, W. B., 719, Mar. 17, Perambulators and other carriages.
 — *W. E.* (*Trottier*), 446, Feb. 21, Extracting tin.
 — *W. E.* (*Von Conring & Voigt*), 566, Mar. 3, Ostrich feathers, &c.

- Gedge, W. E. (*Partz*), 849, Mar. 30, Moulding, &c. sugar.
 — W. E. (*Robin*), 1558, June 12, Lime-kilns.
 — W. E. (*Veauby*), 1634, June 21, Railways.
 — W. E. (*Dujour & Couppe*), 1645, June 22, [Comfits or sugar plums.
 — W. E. (*Laine*), 1723, July 3, Destroying insect [larvæ.
 — W. E. (*Creissard Bros.*), 1864, July 17, Circular [brickwork.
 — W. E. (*Benoit, Peyron & Germain*), 1909, July 21, [Knitting.
 — W. E. (*Lochhead & Mathieu*), 1910, July 21, [Ploughing.
 — W. E. (*Le Bret*), 2171, Aug. 18, Signalling on [trains.
 — W. E. (*Yautier*), 2203, Aug. 22, Ball-proof [cuirass.
 — W. E. (*Pavel*), 2490, Sep. 21, Applications of [sponge.
 — W. E. (*Quiri*), 2491, Sep. 21, Dressing staves [for casks.
 — W. E. (*Vigreux*), 2502, Sep. 22, Cleaning grain.
 — W. E. (*Le Goffie & Jouan*), 2503, Sep. 22, Shoe [and gaiter.
 — W. E. (*Bontems*), 2510, Sep. 23, Lighting and [heating.
 — W. E. (*Gaudefroy*), 2545, Sep. 27, Anti-radiating [felt.
 — W. E. (*Devilleine*), 2580, Sep. 29, Screening.
 — W. E. (*Quilaverth*), 2698, Oct. 11, Preserving [substances.
 — W. E. (*Turon*), 2891, Oct. 28, Fire-arms.
 — W. E. (*Dérémaucourt*), 3122, Nov. 18, Cutting [leather.
 — W. E. (*Petit*), 3173, Nov. 23, Elastic velvets.
 Gee, R., Goss, J., & Willatt, H., 573, Mar. 3, Knitted [fabrics.
 Geer, E., Dudley, R., Gaggin, R. F., & Hershey, B. (Lake), [2467, Sep. 19, Torsion springs & their bearings.
 Geering, H., & Tidmarsh, S., 3203, Nov. 27, Joints for [bedsteads.
 Gebrechs, C. O. (Feldtmann), 692, Mar. 15, Packing.
 — C. O. (Soul), 850, Mar. 30, Clock escapements.
 Geisenberger, E., & Cherpit, G., 3056, Nov. 13, Motive- [power.
 Gelstharp, C., & Gibb, T., 624, Mar. 9, Metallic solutions, &c.
 — C., Hall, J., & Gibb, T., 3143, Nov. 21, Soda [and potash.
 Gent, P., 3023, Nov. 9, Portable gas oven.
 — P., 3162, Nov. 22, Boiler for cooking & heating, &c.
 George, A. M. (Newton), 428, Feb. 17, Pen-holders.
 George, B. G., 1152, Apr. 29, Laying powder colours, &c. [on surfaces.
 Gerken, H., 656, Mar. 11, Refining sugar.
 Germain, Benoit, & Peyron (Gedge), 1909, July 21, [Knitting.
 Gibb, T., & Gelstharp, C., 624, Mar. 9, Metallic solutions, &c.
 — T., & Gelstharp, C., & Hall, J., 3143, Nov. 21, [Soda and potash.
 Gibbons, W., & Metcalf, A., 1687, June 28, Fallor re- [liever for mules.
 Gibbs, C., 3319, Dec. 8, Distributing sand, &c. on roads.
 — W., 256, Jan. 31, Treating and preparing flax.
 — W., & Andrews, G. H., 2525, Sep. 25, Treating [fibrous plants.
 — W. A., 2539, Sep. 26, Drying sewage precipi- [tates, &c.
 Gibson, T. B., 2961, Nov. 4, Figured fabrics.
 Giffard, P., 2011, July 31, Pistons.
 Gilbee, W. A. (*Leggo & Desbarats*), 1409, May 25, [Photography.
 — W. A. (*Procopé*), 2858, Oct. 25, Harmoniums, &c.
 Gilbert, F. W., 2104, Aug. 10, Agricultural implements.
 — G., & Ellis, G. H., 52, Jan. 10, Plates for boots [and shoes.
 — G., & Ellis, T. A., 169, Jan. 23, Railway rails.
 Gilbertson, A., 3287, Dec. 6, Tin and terne plates.
 Gilbody, A. H., & Reed, G. W., 1295, May 13, Re- [frigerators, &c.
 Giles, A., & Spratt, W. S., 1672, June 26, Agricultural [implements.
 — A., & Wallace, W. W., 1673, June 26, Horse-rakes.
 — T., 2137, Aug. 14, Steam-engines and slide valves.
 Gillespie, J., 2429, Sep. 15, Preparing and moulding fire [clay.
 Gillingham, J., 2431, Sep. 15, Invalid couches.
 Gillman, A. W., & Spencer, S., 607, Mar. 7, Fining and [preserving beer, &c.
 Gilman, S. H. (Lake), 141, Jan. 19, Refining and age- [ing liquors.
 Gilson, W. H., & Brough, J. (Dawlings), 1406, May 25, [Decolourizing liquids and gases.
 Girdwood, R., 307, Feb. 4, Steam-boilers.
 — R., 2535, Sep. 26, Decorticating, &c. grain, &c.
 Gisborne, F. N., 752, Mar. 20, Signalling.
 Gisborne, F. N., & Bell, H. P. (Baker), 1218, May 5, [Drills.
 Gisborne, J. S., 773, Mar. 22, Mechanical telegraphs.
 Gispert, Reixach Y., & Lister, S. C., 1117, Apr. 27, [Looms.
 Gladwin, R. S., & Hotchkiss, T. D. (Haseltine), 3176, [Nov. 23, Shears.
 Glaister, T. (Lake), 1074, Apr. 22, Sawing stone.
 Glaskin, E. E., 492, Feb. 24, Safety valves.
 Glazier, W., & Williamson, J., 2497, Sep. 22, Dry- [closets, &c.
 Gloag, H. D. (Newton), 856, Mar. 30, Treating syrup [and sugar.
 Glover, F. R. A., 609, Mar. 7, Hoisting, &c. heavy bodies.
 — F. R. A., 2370, Sep. 7, Hoisting, lowering, &c.
 — G., 1674, June 26, Invalid bedsteads.
 — J., & Goodman, A., 1385, May 23, Bleaching [powder.
 — W. H., & Hargreaves, J., 459, Feb. 22, Looms.
 Goddard, K., & Adams, J. P. (Bousfield), 2064, Aug. 4, [Refrigerative vessels, &c.
 Goddu, L. (Townsend), 1079, Apr. 24, Nailing shoes, &c.
 Godfrey, C. (Newton), 2393, Sep. 11, Preventing oxi- [dation.
 Goffie, P. M. le, & Jouan, L. E. (Gedge), 2503, Sep. 22, [Shoe and gaiter.
 Goldsmith, G., & Dilkes, J., 2063, Aug. 4, Heating by gas.
 Goll, R. (*Moll*), 2672, Oct. 9, Cows or hoods.
 Gonzalo, L. L. de, & Grisei, S. (Brandon), 1815, July 12, [Ships' mattresses, &c.
 Good, J. (Newton), 2211, Aug. 22, Forming fibre slivers.
 Goodall, J. M. (*Mauger*), 1880, July 19, Cutting, &c. [cards, &c.
 Goodchild, W. H. (Lake), 1107, Apr. 27, Joiners' clamps.
 Goodenough, R. A. (Hunt), 1935, July 22, Egg-beaters [or liquid mixers.
 Gooderham, J., 1484, June 3, Lamp shades.
 Goodes, E. A. (Lake), 1038, Apr. 20, Photographs on [glass.
 Gooding, R. A., 217, Jan. 27, Cork drawers.
 — R. A., 978, Apr. 13, Checking receipt of [money.
 Goodman, A., & Glover, J., 1385, May 23, Bleaching [powder.
 — G. H., 358, Feb. 11, Crushing, grinding, and [separating ores.
 — G. H., 2114, Aug. 10, Breaking and crushing [stones, &c.
 Goodwin, C. J., 3516, Dec. 29, Carding cotton, &c.

- Goodwin, W. F. (Lawson), 2870, Oct. 26, Transmitting [power].
 — W. F. (Lawson), 2872, Oct. 26, Harvesting [machines].
 — W. F., & Sanford, J. T. (Lawson), 3024, [Nov. 9, Canal boats].
 Goodyear, C., & Mills, D., 937, Apr. 8, Sewing boots [and shoes].
 Gordon, A. McC., 3070, Nov. 14, Soft metal pipes.
 — C., 777, Mar. 22, Fire-arms.
 — C., 2039, Aug. 2, Cannon and other fire-arms.
 Gordon, G. P. (Jermain), 2869, Sep. 7, Printing [machinery].
 — J. (Hunt), 1348, May 19, Gullies or stench traps.
 Gordon, J., & Forbes, G. F., 431, Feb. 17, Separating [fibres].
 Gordon, J. W. W. (Clark), 2632, Oct. 4, Sewing [machine treadles].
 Gore, G., 501, Feb. 25, Guiding, breaking, &c. tram-car [wheels].
 Goreham, W., 385, Feb. 15, Cement and lime-kilns.
 — W., 2588, Sep. 30, Cement, bricks, tiles, [pottery, &c].
 Gorman, W. A., Christy, T., & Siebe, H. H., 3441, [Dec. 20, Raising sunken vessels].
 Goss, J., Willatt, H., & Gee, R., 573, Mar. 3, Knitted [fabrics].
 Gossage, F. H. & W., 2868, Oct. 25, Sulphates of soda [and potassa].
 — W. & F. H., 2868, Oct. 25, Sulphates of soda [and potassa].
 Gossip, G. H., 841, Mar. 29, Bearing reins and cruppers.
 Goubet, C. D., & Monroq, J. N., 3506, Dec. 28, Litho- [graphic printing].
 Goujet, A., & De Usera, G. (Abel), 2258, Aug. 28, [Furnace grates].
 Gould, O. M. (Lake), 2651, Oct. 6, Grain elevators.
 Goulding, J. (Morgan-Brown), 1199, May 3, Engines.
 Goulding, W. P., 2381, Sep. 9, Packing for joints.
 Gouverneur, H. G., 3502, Dec. 28, Reeds for har- [moniums, &c].
 Gowans, J., 2343, Sep. 5, Boring.
 — J., 2444, Sep. 16, Tramways.
 — J., 2643, Oct. 5, Traction car for tramways.
 — J., 2644, Oct. 5, Tramways and railways.
 — J., 3282, Dec. 6, Tramways.
 Grabham, E. J., 2180, Aug. 19, Regulating supply of [gas].
 Grace, T., 3020, Nov. 9, Registering passengers in vehicles.
 — T., 3492, Dec. 27, Raising weights.
 Graddon, J., 383, Feb. 15, Glands and packing for [piston rods].
 — J., 384, Feb. 15, Steam-boilers.
 Graham, C. B., & Curtis, D. (Lake), 842, Mar. 29, Re- [volving ovens].
 Graham, J. C., 1159, Apr. 29, Breech-loading cannon.
 Graham, J. L. (Newton), 925, Apr. 8, Asphalt roads, &c.
 — J. L. (Newton), 1035, Apr. 19, Mastics, cements, [&c.; applying same].
 Grainger, A., 1099, Apr. 26, Organs.
 — A., 3184, Nov. 24, Organs.
 Grandchamp, P. P. de, 1602, June 17, Jacquard ap- [paratus and cards].
 Granger, T. H. & Hyan, J. P. L., 1381, May 23, Heat- [ing, cooking, &c].
 — T. H., & Hyan, J. P. L., 1445, May 31, Carry- [ing away sewage, &c].
 Grant, G. (Johnson), 2944, Nov. 2, Disengaging ships' [boats].
 Grant, L., & Douglas, R., 3044, Nov. 10, Using grain [husks as fuel].
 — T., 1290, May 13, Compressing fuel.
 Grantham, J., 1991, July 28, Steam carriages for tram- [ways].
 Granville, A. A. B. (Granville), 1970, July 27, Bottle [corking machines].
 Granville, C. W., 2617, Oct. 4, Paper-pulp.
 — C. W., 2758, Oct. 17, Pneumatic signals.
 — C. W., 2829, Oct. 23, Asphalt pavement.
 — C. W., & Smith, A. R. P., 365, Feb. 14, Paper- [pulp].
 — C. W., & Smith, A. R. P., 372, Feb. 14, [Cleaning cotton, &c].
 — W. L., 1506, June 7, Floating turntables.
 — W. L. (Granville), 1970, July 27, Bottle [corking machines].
 Gratrix, C. & J., 2929, Nov. 1, Damping and drying [yarn, &c].
 — J. & C., 2929, Nov. 1, Damping and drying [yarns, &c].
 Grave, A. C. L. (Newton), 3280, Dec. 5, Preventing [stoppages in gas pipes].
 Grawitz, W. J. S. (Clark), 1374, May 22, Preparing [colors].
 Gray, A., & Jones, E., 2103, Aug. 10, Working pumps.
 Gray, G. (Harding), 916, Apr. 6, Self-raising flour.
 — G. (Cheesbrough), 1278, May 13, Self-raising flour.
 Gray, J., 1591, June 16, Ploughs.
 Greasley, W., & Curtis, R., 308, Feb. 4, Spinning and [doubling].
 Greathead, J. H., 2768, Oct. 18, Tunnels or subways.
 Greaves, G., & Holroyd, W., 1154, Apr. 29, Cutting [tenons].
 — H., 2224, Aug. 24, Carriages.
 — James (Cotton), 3526, Dec. 30, Cotton-gins.
 — James R., 1698, June 29, Night-lights.
 — John, 3065, Nov. 14, Horse-shoes.
 Green, C. E. & J., 49, Jan. 9, Fire-arms.
 — E. C. (Abbey & Foster), 929, Apr. 8, Fire-arms.
 — E. C. (Abbey & Foster), 2522, Sep. 23, Fire-arms.
 — G., 158, Jan. 21, Separating ores, &c.
 — G., 2892, Oct. 28, Separating ores, &c.
 Green, G. B. (Clark), 2331, Sep. 4, Saws.
 Green, J. & C. E., 49, Jan. 9, Fire-arms.
 — L. M., 270, Feb. 1, Pipe joints.
 — R., 1421, May 27, Felt hats.
 — T., 1301, May 13, Hot-water boilers.
 — W., 503, Feb. 25, Conical bullets.
 Greenboam, I., 353, Feb. 10, Wearing apparel.
 Greenhill, J. H., 2789, Oct. 19, Disintegrating bones, [ores, &c].
 Greenslade, J., 3443, Dec. 20, Cultivating by power [engines].
 Greenstreet, T. G., 2574, Sep. 29, Cleansing streets.
 Greenwood, F. A., & Asquith, S. E., 947, Apr. 10, [Spinning].
 — J., & Parker, T. W., 1062, Apr. 22, Spinning.
 — J., & Parker, T. W., 1679, June 27, Spinning.
 — J. O., Mills, D., & Pearson, M., 411, Feb. 16, [Looms].
 — J. O., Mills, D., & Pearson, M., 2514, Sep. 23, [Weaving].
 Gregg, W. D., Kelly, R. R., & Bell, J. C., 2845, Oct. 24, [Utilising gas liquor].
 Gregory, C. A. (Connolly), 871, Apr. 1, Measuring [fluids, &c].
 Gregory, E., 3200, Nov. 27, Fining ales.
 — J., & Allan, G., 2693, Oct. 11, Railway chairs [and sleepers].
 Greiff, P. (Wrigley), 58, Jan. 10, Railway-sleepers.
 Greig, D., & Eyth, M., 980, Apr. 13, Traction-engines.
 — D., & Daniel, W., 1599, June 16, Compressing air.
 — D., & Burton, R., 1782, July 7, Transporting [produce].

Greig, D. & J., 3290, Dec. 6, Lathographic and type [printing].
 — J. & D., 3290, Dec. 6, Lithographic and type [printing].
 Gridley, J. (Chance), 1243, May 8, Retorts for acids.
 Griffin, G. F., 1736, July 4, Motive-power.
 — J. T., & Yull, G. T., 771, Mar. 22, Reaping and [mowing].
 — J. T. (Wood), 1324, May 16, Reaping & mowing.
 — J. T. (Chadborn & Coldwell), 2397, Sep. 12, [Lawn-mowers, &c].
 Griffiths, R., 2991, Nov. 7, Steam ships and propellers.
 — R. & W. J., 536, Feb. 28, Screw-propellers.
 — T., 1522, June 8, Enamelling, &c.
 — W., & Corbett, W., 650, Mar. 11, Fetting for [furnaces].
 — W. J. & R., 536, Feb. 28, Screw-propellers.
 Grimaldi, F. (Newton), 2579, Sep. 29, Thrashing, &c.
 Grimes, F. T. (Newton), 429, Feb. 17, Lamps.
 Grindley, R. D., 2951, Nov. 3, Paving composition.
 Grindrod, J., 1293, May 13, Boiler-feed; fluid meter.
 Grisei, S., & Gonzalo, L. L. de (Brandon), 1815, July 12, [Mattresses, &c].
 Grison, T. (Abel), 2259, Aug. 28, Dyeing woollen waste.
 — T. (Abel), 2362, Sep. 7, Printing on cloth.
 Grinder, W. (Crowley), 3491, Dec. 27, Looms.
 Groat, E., Pond, M. B., & Cantelove, W. (Haseltine), [2583, Sep. 30, Churns].
 Groat, W. H. J., & Noble, F. J., 1468, June 2, Bicycles [and velocipedes].
 Grove, J., 3252, Dec. 1, Metallic furniture.
 Grubb, H., 1968, July 27, Photographic lenses.
 Guattari, A., 1624, June 20, Atmospheric telegraphs.
 — A., 2797, Oct. 19, Pneumatic telegraphs.
 Guattari, A. (Sperati), 1346, May 19, Ships' signals.
 Guattari, A., & Baccellieri, A., 2281, Aug. 30, Gloves.
 Guerriero, A., Cadoux, L. A. & O'Connell, E. (Bonneville), 2096, Aug. 9, Paving.
 Guest, W., & Craddock, E., 144, Jan. 20, Ropes, cords, [wire ropes].
 Guibal, T. (Cochrane), 173, Jan. 23, Indicating velocity [of air, and speed of machinery].
 Guinet, A., Lemarchand, V. E., & Houbé, A. Z., 1594, [June 16, Cutting wood].
 Guinotte, L., 3094, Aug. 9, Varying the expansion of steam.
 Guise, W., & Thomas, S., 538, Feb. 28, Needles; needle [wrappers].
 Gulliver, G., 1768, July 6, Securing handles to spindles.
 Gunn, J., 3248, Dec. 1, Water-closets and sinks.
 Gurrin, J., 1091, Apr. 25, Fastening broken bars, poles, &c.
 — J., 2766, Oct. 18, Fastening broken bars, &c.
 Guthrie, A., & Stevenson, J., 531, Feb. 27, Motive-power [engines, &c].
 Gusman, P., 2866, Oct. 25, Motors.
 Gwynne, G., 1675, June 26, Treating fatty and hydro- [carbon bodies].
 — J. E. A., & Beale, B., 3449, Dec. 20, Rotary- [engines].

H.

Haas, J., & Meyer, B. (Clark), 2890, Oct. 27, Telegraphs.
 Hacker, W. A. (Hunt), 2144, Aug. 15, Tanning hides or [skins].
 Hacking, T., & Jones, I., 521, Feb. 27, Steam-boilers.
 — T., & Phillips, P. S., 823, Mar. 28, Steam- [generators].
 Haddan, J. C., 1953, July 25, Wheels, carriages and [tramways].

Hadfield, G., 659, Mar. 13, Preparing yarns or threads.
 Haggis, W., & Bottomley, J., 1515, June 8, Preparing, [combing, &c. fibres].
 Haigh, J. F., 743, Mar. 20, Loom pickers.
 Haines, M. J., 2515, Sep. 23, Packing for engines, &c.
 — M. J., 2773, Oct. 18, Driving straps or bands.
 Hale, M., 73, Jan. 12, Carriage-axles.
 Haley, John, T., S. & S., & Paul, W., 1217, May 5, [Finishing leather].
 — Jonas, Roberts, L., & Armitage, E., 2917, Oct. 31, [Consuming smoke].
 — Sam, S., J. & T., & Paul, W., 1217, May 5, [Finishing leather].
 — Sugden, J., T. & S., & Paul, W., 1217, May 5, [Finishing leather].
 — T., S., S. & J., & Paul, W., 1217, May 5, Finish- [ing leather].
 Hall, C. E., & Archer, T., 3046, Nov. 11, Traction-engines.
 — C. H., Nussey, A., & Pilling, A., 1720, July 3, [Sewing-machines].
 — C. H., Nussey, A., & Pilling, A., 3172, Nov. 23, [Sewing-machines].
 — D., & Bull, W., 2747, Oct. 17, Salt.
 — E., 41, Jan. 7, Forming & shaping malleable metals.
 — James, Gibb, T., & Gelstharp, C., 3143, Nov. 21, [Soda and potash].
 — John, 2396, Sep. 12, Fire-arms.
 Hall, John H., & Webster, J. J. (Lake), 3349, Dec. 11, [Disintegrating, &c].
 Hall, Julius, 3049, Nov. 11, Window-sash fastener.
 — Julius, 3050, Nov. 11, Registering apparatus for [cranes, &c].
 — Julius, 3106, Nov. 16, Buckle for harness straps, &c.
 — Julius, 3314, Dec. 7, Fasteners for gloves, stays, &c.
 — R., 2663, Oct. 9, Tins, cases, flasks, jars, &c.
 — S. H., & Wormald, W., 1090, Apr. 25, Sewing- [machines].
 — T., 846, Mar. 29, Water-closet cisterns.
 Hall, T. S., & Van Blarcom, A. L. (Lake), 2150, Aug. 15, [Signalling].
 Halliday, T., 962, Apr. 12, Brewers' furnaces, &c.
 Halliwell, H., 2453, Sep. 18, Bands for grooved pulleys.
 Hamer, J., Carr, G. W., & Butterworth, G., 577, Mar. 3, [Printing fabrics].
 Hamilton, A., & Sax, J., 1027, Apr. 18, Cabs, &c.
 — A., & Sax, J., 1574, June 14, Signalling.
 Hammer, G. M., 413, Feb. 17, School furniture.
 Hammond, E. & H., Russ, E., & Morris, T. S., 766, [Mar. 21, Fire-arms and cartridges].
 — H. & E., Russ, E., & Morris, T. S., 766, [Mar. 21, Fire-arms and cartridges].
 — H. W. (Jullien), 3392, Dec. 14, Movable [stamps].
 Hanbury, L. H., 83, Jan. 12, Hair curling instruments.
 Hancock, C. L. & F. L., 3353, Dec. 12, Forming bread- [crumbs, &c].
 — D., & Pearce, C., 2025, Aug. 1, Gas.
 — F. L. & C. L., 3353, Dec. 12, Forming bread- [crumbs, &c].
 Handcock, E. R., 1616, June 20, Propelling vessels.
 Handley, J., & Jaukroger, J., 34, Jan. 6, Furnaces.
 Hankinson, W. H. (Clark), 5, Jan. 2, Carpet beaters.
 Hansen, G. E., 328, Feb. 8, "Spars & gear" for vessels.
 Hanson, D., 402, Feb. 16, Flanching, moulding, &c. plates [and bars].
 Harding, C. (Gray), 916, Apr. 6, Self-raising flour.
 — G. P., 323, Feb. 7, Tell-tales for tram-cars, &c.
 — J. W., 8194, Nov. 25, Registering passengers in [vehicles].
 — W., 1662, June 24, Cartridge pouches.
 — W. B., & Marshall, J., 3337, Dec. 9, Steam- [engines].

Hardy, C. A., Stayner, A. E., & Harrison, J., 2498, Sep. 22, [Picks, hammers, axes, &c.]
 — C. A., & Stayner, A. E., 2527, Sep. 25, Shafting [picks, &c.]
 Hargreaves, James, 3192, Nov. 25, Purifying dilute chlorine.
 — James, & Glover, W. H., 459, Feb. 22, Looms.
 — James, & Robinson, T., 1733, July, 4, Sulphates.
 — James, & Robinson, T., 1854, July 15, Absorbing gases by solids.
 — James, & Robinson, T., 1920, July 21, Sulphuric acid and sulphates.
 — James, & Robinson, T., 1923, July 21, Treating ores.
 — James, & Robinson, T., 1928, July 22, Sulphates.
 — James, & Robinson, T., 2329, Sep. 4, Chlorine.
 — John, & Rostron, W., 618, Mar. 8, Preventing [railway accidents].
 Harivel, A. L. le, 3418, Dec. 18, Elastic steel wheels.
 Harland, E. J., 2750, Oct. 17, Propelling vessels.
 Harle, J., 1781, July 7, Tools for cutting metal.
 Harley, T. E., 68, Jan. 11, Railway signals.
 Harling, G., & Whiteley, J. B., 243, Jan. 30, Looms.
 Harlow, B., 1033, Apr. 19, Cast iron pipes.
 Harman, H. W., & Mills, W. H. J., 1112, Apr. 27, Indicating time between passing trains.
 Harper, H. R., 2600, Oct. 3, Lifting and weighing cranes.
 Harper, J. (Hughes), 2494, Sep. 22, Steam lubricators.
 Harrington, B. F. & H. H., & Holdredge, A. (Newton), 177, Jan. 23, Cheese.
 Harrington, G. F., 1820, July 12, Propelling ships.
 Harrington, H. H. & B. F., & Holdredge, A. (Newton), 177, Jan. 23, Cheese.
 Harrington, J., 109, Jan. 14, Imitation leather, &c.
 — J., 2423, Sep. 14, Imitation leather, &c.
 — J., & Richards, W. F., 2538, Sep. 26, Imitation leather, &c.
 Harrington, J. R. (Haseltine), 1399, May 24, Carpet [linings].
 Harris, A. W. (Lake), 727, Mar. 17, Sewing-machines.
 — E., & Oliver, J. S. (Harris), 1048, Apr. 21, [Distilling whiskey, &c.]
 Harris, I. B., 1155, Apr. 29, India-rubber hose.
 — I. B., 2846, Oct. 24, Piston packing.
 — J., 123, Jan. 18, Steam-boilers.
 — J., 1056, Apr. 21, Ordnance.
 — M. M. (Oliver & Harris), 1048, Apr. 21, Distilling whiskey, &c.
 — M. M., Brady, Sir A., & Dresser, H. E. (Washburn), 2788, Oct. 19, Couplings.
 Harrison, C. W., 1635, June 21, Applying electricity to [therapeutic purposes].
 — C. W., 3396, Dec. 14, Gas-burners.
 — G., H. & W., 1111, Apr. 27, Spinning mules.
 — H., 1775, July 7, Sizing yarn.
 — H., 3421, Dec. 18, Pulp, stripping, &c. turnips.
 — H., W. & G., 1111, Apr. 27, Spinning mules.
 — J., Hardy, C. A., & Stayner, A. E., 2498, Sep. 22, [Picks, hammers, axes, &c.]
 — J. H., 3363, Dec. 12, Raising and lowering [apparatus].
 — T., 1814, July 12, Seed and manure drills.
 — W., G. & H., 1111, Apr. 27, Spinning mules.
 — W., 1900, July 20, Fixing doors handles and [escutcheons].
 Harrod J. (Clark), 1076, Apr. 24, Converting reciprocating into rotary motion.
 Harrop, J., & Erskine, F., 960, Apr. 12, Chaff cutting [machines].
 Harston, C. G., 2124, Aug. 11, Fire-arms.

Hart, D., 3279, Dec. 5, Travelling bags, &c.
 — H. W., 1132, Apr. 28, Hats, caps, &c.
 — H. W., 2901, Oct. 28, Hats, caps, &c.
 — J., 930, Apr. 8, Jewellery.
 — S., 2017, Aug. 1, Carriages.
 Hartmann, W. E. A., 2678, Oct. 9, Burning pulverized [fuel].
 Harvey, H. A., Rogers, C. D., & Wilkins, M. P. (Newton), 2501, Sep. 22, Brushes.
 Harvey, H. C., & Walton, T., 265, Feb. 1, Locks & latches.
 Haseler, G. C., 791, Mar. 23, Locketts.
 Haseltine, G. (Kellogg & Cutler), 21, Jan. 5, Sewing-machines.
 — G. (Holley), 69, Jan. 11, Casting iron & steel.
 — G. (Ross), 86, Jan. 12, Agricultural implements.
 — G. (Small), 124, Jan. 18, Alarm ticket punches.
 — G. (Allen), 125, Jan. 18, Shot-pouches.
 — G. (De Busson), 126, Jan. 18, Table spoons.
 — G. (Sperry), 235, Jan. 28, Pillows, bolsters, &c.
 — G. (Watkins), 373, Feb. 14, Telegraphs and fire-alarms.
 — G. (Slingerland), 410, Feb. 16, Distributing [type].
 — G. (Dupas & Barbarin), 452, Feb. 21, Carburetting air.
 — G. (Leggo), 471, Feb. 22, Spectacles or eye glasses.
 — G. (Dupas & Barbarin), 472, Feb. 22, Carburetting air.
 — G. (Dupas), 475, Feb. 23, Gas-burners.
 — G. (Spénard & Letourneux), 476, Feb. 23, [Combined knife and glass-cutter].
 — G. (Balch & Nelson), 477, Feb. 23, Separating [magnetic iron].
 — G. (Leggo), 518, Feb. 25, Electro-typing.
 — G. (Perkins, Moulton & Sawyer), 528, Feb. 27, [Steam-traps].
 — G. (Leggo), 540, Feb. 28, Photo-electrotyping.
 — G. (Morrison), 578, Mar. 2, Flexible shaft [ing, &c.]
 — G. (Leckie), 909, Apr. 5, Concentrating [brine, &c.]
 — G. (Harrington), 1399, May 24, Carpet [linings].
 — G. (Hedden & Hill), 2166, Aug. 17, Plates [for sun pictures].
 — G. (Leggo), 2254, Aug. 28, Motive-power.
 — G. (Young), 2288, Aug. 30, Matches.
 — G. (Mitchell), 2299, Aug. 31, Grinding [quartz, &c.]
 — G. (Roff, Hoffman & Lukey), 2408, Sep. 12, [Indicating weight of cargo].
 — G. (Groat, Pond & Cantelow), 2583, Sep. 30, [Churns].
 — G. (Rowell & Duncan), 3108, Nov. 16, Alarm [for safes].
 — G. (Gladwin & Hotchkiss), 3176, Nov. 23, [Shears].
 — G. (Shelley & Bullock), 3270, Dec. 4, Excavating rocks, &c.
 Haskell, E., 2049, Aug. 3, Alarm pump for vessels.
 Hatcher, J. J. & Farmer, G. P. (Pratt), 1861, July 17, [Buttons].
 Hattersley, R. L., & Smith, J., 3030, Nov. 9, Looms.
 Hatton, E. H. & G., 2279, Aug. 30, Raising and lowering blinds, &c.
 — E. H. & G., 2530, Sep. 25, Working blinds, [maps, &c.]
 — G. & E. H., 2279, Aug. 30, Raising and lowering blinds, &c.

- Hatton, G. & E. H., 2530, Sep. 25, Working blinds, [maps, &c.
Hauzeur, J. (Newton), 3228, Nov. 29, Heating furnaces, &c.
Havemeyer, H. C. (Clark), 1352, May 19, Dressing, &c., [leather.
 Hawksley, G., & Norton, J. L., 132, Jan. 18, Mills.
 Hawksworth, M., & Butterworth, E., 3025, Nov. 9, Looms.
 Haworth, W., 2821, Oct. 21, Rolling tea leaf.
 Hay, G. R., 320, Feb. 7, Dressing millstones.
 — W. J., 2855, Oct. 25, Preparing cork for ships, &c.
 Hayercraft, G., 2933, Nov. 1, Gunpowder.
 Hayem, J. (Newton), 2271, Aug. 29, Reducing rags, &c.
 Hayes, E. O., 1473, June 2, Boats.
 Hayes, G. (Newton), 2210, Aug. 22, Skylights, &c.
 Hayes, J. T., & Deakin, W., 2213, Aug. 23, Tobacco pipes.
 Hayman, J., 1329, May 17, Fire-escapes.
 Haynes, E. & H., 1780, July 7, Reels for flexible tubing.
 — H. & E., 1780, July 7, Reels for flexible tubing.
 Hays, J. J., 111, Jan. 16, Drying peat.
 — J. J. & W. B., & Whieldon, W., 2100, Aug. 10, [Peat, peat-charcoal.
 — W. B. & J. J., & Whieldon, W., 2100, Aug. 10, [Peat, peat-charcoal.
 Hayward, E. L., 2014, July 31, Pavement lights.
 Hayseard, J. W. & Champney, G. F. (Lake), 2687, Oct. 10, [Dies.
 Haywood, G. H., & Parker, F., 216, Jan. 27, Stove-grates.
 Head, J., 754, Mar. 20, Puddling furnaces, &c.
 — J., & Thomson, R. W., 434, Feb. 18, Road steamers [for farming.
 — J., & Jefferies, J. R., 588, Mar. 4, Cultivating im- [plements.
 Heald, G. W., Morris, W. F., & Sisco, E. (Abel), 3189, [Nov. 24, Pumps.
 Heald, J., 3072, Nov. 14, Selfacting door fasteners.
 Healey, B. D., 2415, Sep. 14, Casting pits and cranes.
 Heap, J., & Butterworth, E., 2712, Oct. 13, Boilers and [furnaces.
 Hearne, W. (Armstrong), 2023, Aug. 1, Game-boards [for chess, &c.
 Heath, E. A., 1858, July 15, Cuspadores or spittoons.
 — J. S., 1512, June 8, Fire-arms.
 — W. E., 2913, Oct. 31, Street tramways, &c.
 Hedden, H., 382, Feb. 15, Spinning.
 Hedden, H. M., & Hill, C. A. (Haseltine), 2166, Aug. 17, [Plates for sun pictures.
 Heery, L. M. (Lake), 2152, Aug. 15, Steaming and [cooling cloth.
 Heesom, W., 1102, Apr. 26, Furnace bars.
 Heginbottom, J., 304, Feb. 4, Steam-boilers & furnaces.
 Heilmann, J. & P. (Clark), 1600, June 16, Weaving.
 — P. & J. (Clark), 1600, June 16, Weaving.
 Heinemann, A. H., 2783, Oct. 18, Desks, tables, & seats.
 Hellier, H. G., 3453, Dec. 20, Saucepans.
 Helliwell, L., 2330, Sep. 4, Recovering animal fibres.
 — T., 1871, July 18, Weaving.
 Helwig, A., 13, Jan. 3, Button-hole sewing-machines.
 Henderson, A., 1787, July 8, Piston packings.
 — A. C. (Courthoux), 3520, Dec. 30, Cigar- [cases.
 — J., 397, Feb. 16, Chain pulleys.
 Henderson J., (Newton), 688, Mar. 15, Refining, &c. [cast iron.
 Henderson, J., & Königs, E., 1642, June 22, Sulphate of [soda, hydrochloric acid, &c.
 — W., 3080, Nov. 15, Chlorine and bleaching [powder.
 Henderson, W. L. (Abel), 1331, May, 17, Cotton gins.
 Henley, G. M., & Moffatt, W. B., 1827, July 12, Burning [bricks, &c.
 — T. F., 1233, May 6, Preserving food.
 Henley, T. F., 3188, Nov. 24, Preserving organic liquids.
 — W. T., 396, Feb. 16, Hauling, lifting, & towing.
 — W. T., & Horstman, H., 2800, Oct. 20, Magneto- [electric signalling.
 Hennis, S. J., 703, Mar. 16, Compounds for use as paint, &c.
 Henry, A. & G., 2751, Oct. 17, Hat shape or head dress.
 — G. & A., 2751, Oct. 17, Hat shape or head dress.
 — M. (Mack & Blake), 254, Jan. 31, Sewing-machines.
 — M. (De Laterrière), 464, Feb. 22, Bedsteads.
 — M. (De Vauréal), 2413, Sep. 13, Desilvering lead.
 Hentschel, A., & Denne, T. J., 730, Mar. 18, Preparing [surfaces for prints, printing, &c.
 Hepworth, S. S., 3375, Dec. 13, Centrifugal machines.
 Herring, R., 1916, July 21, Printing telegraphs.
 Herrmann, L. A. (Clark), 2852, Oct. 24, Traction-engines.
 Hershey, B., Geer, E., Dudley, R., & Gaggin, R. F. (Lake), [2467, Sep. 19, Torsion springs & their bearings.
 Hesse, M. (Marx), 2318, Sep. 2, Copying letters, &c.
 Hessin, W. (Newton), 289, Feb. 2, Lozenges.
 Hetherington, J. M., & Knowles, W., 228, Jan. 28, Ren- [dering roller surfaces true.
 — J. M., & Knowles, W., 1180, Apr. 28, [Clearing spinning rollers.
 Heyes, G., & Entwistle, T., & Cummings, E. H., 1119, [Apr. 27, Warping machines.
 Heyl, C. O., 2786, Oct. 19, Distilling oil, regaining bi- [sulphite, &c.
 Heyl, H. R. (Mills), 2835, Oct. 24, Paper boxes, &c.
 Heywood, E., 2720, Oct. 13, Washing machines.
 — G., & Whewell, G., 2993, Nov. 7, Steam-boilers [and furnaces, &c.
 Heyworth, R., 474, Feb. 23, Supplying water to basins, &c.
 Hick, W., 1345, May 19, Button fastener.
 Hickman, E. (Bailey) 655, Mar. 11, Hernia truss.
 Hickman, J., 1437, May 30, Railway signals.
 Hidden, E. S. (Lake), 1653, June 23, Tearing leather [into shreds.
 Hies, F. (Blumfeld), 1320, May 16, Pipes, cigar tubes, &c.
 Higham, T., 26, Jan. 5, Harmoniums.
 Highton, H., 1643, June 22, Galvanic batteries.
 — H., 2084, Aug. 7, Galvanic batteries.
 Hildesheim, J., 2217, Aug. 23, Obtaining fresh water and [salt from sea water.
 Hildred, J., 1745, July 4, Ventilating and trapping sewers, &c.
 Hiler, S. (Lake), 3466, Dec. 21, Copper-covered wire.
 Hiley, C., 757, Mar. 21, Extracting madder for dyeing, &c.
 Hill, C. A., & Hedden, H. M. (Haseltine), 2166, Aug. 17, [Plates for sun pictures.
 Hill, E. J., 2935, Nov. 1, Boat-detaching apparatus.
 — J., 3142, Nov. 21, Loom temples.
 — L., 1973, July 27, Tramways.
 — R., & Hodson, E., 31, Jan. 6, Railway signals and [breaks.
 Hill, S. A., & Thumm, C. F. (Johnson), 1450, May 31, [Heating.
 Hinchcliffe, J., & Milnes, T., 3097, Nov. 16, Furnaces.
 Hinchliff, G. S., & Chapman, C. P. L. (De Broca), 1755, [July 5, Sights for ordnance & fire-arms.
 Hinchliffe, J., 1753, July 5, Furnaces.
 Hirsch, H., 2257, Aug. 28, Screw-propellers.
 Hirst, James, J. & J., 368, Feb. 14, Wringing and mangling.
 — John, J. & J., 368, Feb. 14, Wringing and mangling.
 — Joseph, J. & J., 368, Feb. 14, Wringing & mangling.
 — T., 1442, May 31, Lamp wick looms.
 Hobson, A. M., 3027, Nov. 9, Converting motions.
 Hocking, F., & Pinker, J., 3372, Dec. 13, Slide-valves.
 Hodgart, J., & Jones, C., 1785, July 7, Pressing cotton, &c.
 Hodge, P. R., 398, Feb. 16, Waterproofing fabrics.
 Hodgert, S., & Masson, J. (Day), 950, Apr. 11, Hydraulic [presses.
 Hodges, E. C., 251, Jan. 31, Fire-arms.
 — J., 2178, Aug. 18, Cooking and laundry stoves.

- Hodges, J., 3241, Nov. 30, Purifying paraffin.
 Hodgkin, J. E., & Brasier, E., 92, Jan. 13, Breaking and [scutching flax, &c.
 Hodgson, G., & Broadley, J., 751, March 20, Looms.
 — G., & Moxon, W., 1251, May 9, Weaving [carpets, &c.
 Hodson, E., & Hill, R., 31, Jan. 6, Railway signals and [breaks.
 — R., 2065, Aug. 4, Indicating names of stations.
 Hoe, R. M. (Newton), 1825, July 12, Letter-press printing.
 Hoeller, C. (Millward), 699, Mar. 16, Forming bends in [pipes.
 Hoffman, W. B., Lukey, J., & Roff, S. (Haseltine), [2408, Sep. 12, Indicating weight of cargo.
 Hogg, F., 156, Jan. 21, Domestic fire-places.
 — J., 811, Mar. 25, Toys or toy books.
 — J. A., 1742, July 4, Safety lamps.
 — W. B. G., Thomlinson, J., & Terrell, T., 3116, [Nov. 17, Sulphuric acid.
 Hoggson, S. J. (Hughes), 3146, Nov. 21, Printing on [enamelled surfaces.
 Holden, J., & Tuer, M. & M., 652, Mar. 11, Looms.
 — W. S., 272, Feb. 1, Preparing & spinning fibres.
 Holding, J., 733, Mar. 18, Loom temples and healds.
 — J., 1848, July 14, Looms.
 Holdredge, A., Harrington, B. F. & H. H. (Newton), [177, Jan. 23, Cheese.
 Holdsworth, Jacob, 2767, Oct. 18, Gas supply pipe.
 — John, W. I. & T., 1068, Apr. 22, Textile [fabrics.
 — T., J. & W. I., 1068, Apr. 22, Textile fabrics.
 — W. I., T. & J., 1068, Apr. 22, Textile fabrics.
 Holland, P., 334, Feb. 9, Colors for dyeing and printing.
 — W., 1264, May 10, Clipping horses, &c.
 Holley, A. L. (Haseltine), 69, Jan. 11, Casting iron & steel.
 Hollins, M. D., 682, Mar. 15, Plates for flat printing, &c.
 Hollinshead, W., 939, Apr. 10, Cone or plug valves.
 — W., 1804, July 11, Lighting railway carriages.
 Hollmann, H. L., 3036, Nov. 10, Electric telegraphs.
 Holmes, F. H., 674, Mar. 14, Fog signals.
 — J. E., 2000, July 29, Cutting, &c. stone.
 — J. E., 3015, Nov. 8, Asphalte paving compound.
 — J. E. (Emerson), 2706, Oct. 12, Saw teeth.
 — J. E., & Taylor, F. B., 3427, Dec. 18, Brakes; [starting carriages.
 — S., 447, Feb. 21, Optical instruments.
 — S., 2184, Aug. 19, Optical instruments.
 — S., 2966, Nov. 4, Lamps.
 Holroyd, W., & Greaves, G., 1154, Apr. 29, Cutting tenons.
 Holt, C. H., 683, Mar. 15, Furnaces.
 — W., 2164, Aug. 17, Working bellows of organs, &c.
 Holten, S. E., 3309, Dec. 7, Counting, indicating, &c.
 Homan, J., 2731, Oct. 14, Joists and girders.
 Hooper, W. (Lake), 1096, Apr. 25, Concentrating ores.
 Hopcraft, W., & Davis, G. D., 2046, Aug. 3, Working [anchors.
 Hope, A., & Browne, H. J. (Johnson), 741, Mar. 18, [Breaking stone, &c.
 — A., & Browne, H. J. (Johnson), 3508, Dec. 28, [Breaking stone, &c.
 Hope, D., Stevenson, J. C., & Welsh, J., 2761, Oct. 17, [Purifying air for ventilating.
 Hopkinson, E., & Sellers, J., 2816, Oct. 21, Effecting [calculations.
 — J., 1204, May 4, Shipping coal, &c.
 — J., 1292, May 13, Weighing machines.
 — J., 1358, May 20, Steam-engines.
 Horley, M. E., 2357, Sep. 6, Conservatories and garden [frames.
 Hornblower, L., 2848, Oct. 24, Walls, roofs, &c.
 Horner, G., 732, Mar. 22, Hackling flax, &c.
 Hornsby, R., & Phillips, J. E., 982, Apr. 13, Ploughs.
 Hornsby, R., & Phillips, J. E., 1798, July 8, Reaping and [mowing.
 Horrocks, John (Horrocks), 117, Jan. 17, Pistons.
 Horrocks, Joseph, 2733, Oct. 14, Loom pickers.
 — Joshua (Horrocks), 117, Jan. 17, Pistons.
 Horsell, H., 2947, Nov. 2, Coverings for corn stacks, &c.
 Horsfall, D., 951, Apr. 11, Preparing fibres for carding.
 Horstman, H., Blakemore, R., & Sherring, W. A., 2379, [Sep. 8, Locking and unlocking bolt nuts.
 — H., & Henley, W. T., 2800, Oct. 20, Magneto- [electric signalling.
 Horton, J., 416, Feb. 17, Screw-propellers.
 — J., 596, Mar. 6, Gaseliers, gas pendants & brackets.
 — J., & Dean, J., 1472, June 2, Cut nails & tacks.
 Hosken, J., 151, Jan. 20, Controlling flow of liquids.
 — J., & Fleury, F. G., 2047, Aug. 3, Water-waste [preventers.
 Hosking, A. W., 2489, Sep. 21, Advertising.
 — J., 2182, Aug. 19, Spanners, wrenches, &c.
 Hoskold, H. D., & Winspear, J. E., 1240, May 8, Sur- [veying instruments.
 Hotchkiss, B. B. (Brandon), 2296, Aug. 31, Projectiles.
 — T. D., & Gladwin, R. S. (Haseltine), 3176, [Nov. 23, Shears.
 Houbé, A. Z., Guinet, A., & Lemarchand, V. E., 1594, [June 16, Cutting wood.
 Houghton, A. B., 3157, Nov. 22, Sad and box irons.
 — T. M., 180, Jan. 24, Plumbing and indicating [angles.
 — W., 1774, July 6, Cleaning grain.
 House, J., 2275, Aug. 30, Extracting weeds from lawns.
 Howard, J., 2424, Sep. 14, Ploughs.
 — J., 2896, Oct. 28, Ploughs.
 — J., & Bousfield, E. T., 1163, May 1, Tubular [steam-boilers.
 — W., 2801, Oct. 20, Footballs.
 Howarth, J., & Butterworth, W., 1636, June 22, Con- [suming smoke.
 — W., & Clayton, R., 593, Mar. 6, Looms.
 Howcroft, T., & McGregor, A., 1582, June 15, Reaping [and mowing.
 Howe, B. P. (Newton), 6, Jan. 2, Sewing-machines.
 — G. W., & Sommerville, D. M. (Lake), 1830, [July 12, Knitting-machines.
 — Machine Co. (Stockwell), 2030, Aug. 1, Sewing- [machines.
 Howitt, W., 3113, Nov. 17, Roofs for buildings.
 Howlett, P. J., 2716, Oct. 13, Vent-pegs.
 Howse, H., 1541, June 10, Sewing-machines.
 — H., & Day, C. A., 3333, Dec. 9, Sewing-machines.
 Howson, R., & Thomas, J. J., 2881, Oct. 27, Puddling [furnaces.
 Hoyle, C., & Bailey, I., 2309, Sep. 1, Washing fibres.
 Huch, E. H., 2459, Sep. 18, Keeping off flies, &c.
 Huckvale, T., 82, Jan. 12, Saddles.
 Hudson, J. G., & Gaunt, E., 3276, Dec. 5, Hats.
 Hugentobler, A. (Sacc), 3454, Dec. 20, Preserving meat, &c.
 Huggins, J., 2542, Sep. 27, Open jointed and other tubes.
 Hughan, W. H., 3060, Nov. 13, Manure, &c. from night [soil, ashes, &c.
 Hughes, C. (Hughes), 1032, Apr. 19, Sugar-mills.
 — C. (Hughes), 1230, May 6, Condensing & cooling.
 — C. (Hughes), 1931, July 22, Sugar-mills.
 Hughes, E. T. (Winchester), 32, Jan. 6, Fire-arms.
 — E. T. (Ives), 33, Jan. 6, Plumbago presses.
 — E. T. (Whitney), 350, Feb. 10, Fire-arms.
 — E. T. (Wells), 608, Mar. 7, Boxes, cartridge [cases, &c.
 — E. T. (Snoeck), 920, Apr. 6, Reeling threads or [yarns.
 — E. T. (Shelton), 985, Apr. 13, Driving-whips.
 — E. T. (Weinrich & Schröder), 1185, May 8, Sugar.

Hughes, E. T. (*Sargent*), 1640, June 22, Castors.
 — E. T. (*Sigl*), 1641, June 22, Valves.
 — E. T. (*Peck*), 1732, July 4, Spring bed bottoms.
 — E. T. (*Windhausen*), 2355, Sep. 6, Expansion [valves].
 — E. T. (*Harper*), 2494, Sep. 22, Steam lubricators.
 — E. T. (*Jessup*), 2547, Sep. 27, Kettles for cooking.
 — E. T. (*Snoeck*), 2581, Sep. 29, Reeling threads [or yarns].
 — E. T. (*Curtis*), 2815, Oct. 21, Liquid-meters.
 — E. T. (*Krausse*), 2847, Oct. 24, Hydrometers.
 — E. T. (*Hoggson*), 3146, Nov. 21, Printing on [enamelled surfaces].
 — E. T. (*Kuhlmann*), 3214, Nov. 28, Pegged boots [and shoes].
 — E. T. (*Coit*), 3313, Dec. 7, Interlacing wire work.
 — E. T. (*Kellogg*), 3473, Dec. 22, Drawing or [rolling rods, &c.].
 — E. T. (*Twining*), 3474, Dec. 22, Ice-making.
 — E. T. (*Dunham*), 3476, Dec. 22, Reels for dress- [ing flour].
 — H., 2301, Sep. 1, Screwing, &c. nuts of railway [rails].
 — H., 2675, Oct. 9, Attachment for windows, &c.
 — H., 3129, Nov. 18, Rotating shafts, rods, &c.
 — H., 3395, Dec. 14, Chenille and similar fabrics.
 — J., 919, Apr. 6, Ferrules for umbrellas, &c.
 — J. & Clarke, E., 1481, June 3, Cages for mines, &c.
 — Richard, & Dahne, F. W., 81, Jan. 12, Treating [bran for re-use].
 — Richard H., 291, Feb. 2, Gas-regulators.
 — Robert, 1983, July 28, Sweeping roads, streets, &c.
 — W. (*Hughes*), 1032, Apr. 19, Sugar-mills.
 — W. (*Hughes*), 1230, May 6, Condensing & cooling.
 — W. (*Hughes*), 1931, July 22, Sugar-mills.
 Hugon, G. R. (*Jubelin*), 1344, May 17, Wire netting, [fences, &c.].
 Hull, H. P. (*Johnson*), 1313, May 15, Cultivating im- [plements, &c.].
 Hulme, E., 2361, Sep. 7, Loading or discharging grain, &c.
 Humphrey, J., & Rowley, J., 893, Apr. 4, Measuring [liquids].
 Humy, P. R. F. d', 3041, Nov. 10, Cleansing docks, [basins, &c.].
 Hund, F. & R., 855, Mar. 30, Pianofortes.
 — H. & F., 855, Mar. 30, Pianofortes.
 Hunt, B. (*Féron-Flament*), 584, Mar. 4, Washing wool, [&c.].
 — B. (*Bohman*), 1081, Apr. 24, Breech-loading [rifles, &c.].
 — B. (*Adams*), 1659, June 24, Steam-engine cylinders.
 — B. (*Gariel*), 1895, July 20, Ink-holders.
 — B. (*Goodenough*), 1935, July 22, Egg-beaters or [liquid mixers].
 — B. (*Courtemanche*), 2031, Aug. 1, Aërial navigation.
 — B. (*Hacker*), 2144, Aug. 15, Tanning hides or [skins].
 — B. (*Anders & Welch*), 2435, Sep. 15, Electric [telegraphs].
 — B. (*Tate & Mitchell*), 2504, Sep. 22, Quilting- [machines].
 — B. (*Stone*), 2652, Oct. 6, Steam-boilers.
 — B. (*Copeland*), 3045, Nov. 10, Water-meters.
 — B. (*Amann*), 3158, Nov. 22, Automatic pianos, &c.
 — B. (*Stone*), 3360, Dec. 12, Incubators.
 — C., 166, Jan. 23, Making and distributing gas.
 — E. (*Gordon*), 1348, May 19, Gullies or stench-traps.
 — W., 1918, July 21, Chlorate of potash.
 Hunter, J., 1085, Apr. 24, Blast furnaces.
 — J., 1559, June 13, Utilizing waste gases.
 Hunter, J., & Wilson, P. (*Wilson*), 1912, July 21, Stop- [motion].

Hunter, R. (*Newton*), 971, Apr. 12, Propelling apparatus.
 Huntly, S. H., 1536, June 10, Cooking stoves.
 Huntoon, R. K. (*Allen*), 352, Feb. 10, Engine governors.
 — R. K. (*Allen*), 1255, May 9, Steam governors.
 Hurd, F., 1873, July 18, Breaking loaf-sugar.
 — F., 3431, Dec. 19, Chopping loaf-sugar.
 — F., 3432, Dec. 19, Main pipes and pavements.
 Husband, W., 280, Feb. 2, Ships of war.
 Hutchins, H. E., 1514, June 8, Locks and keys.
 Hutchinson, E., 318, Feb. 7, Treating wheat, rice, &c.
 — E., & Davies, E., 612, Mar. 8, Hydraulic [machines].
 Hutchinson, E. S. (*Mills*), 1044, Apr. 20, Removing oil [from matter; making beer, &c.].
 — T. (*Norman*), 913, Apr. 6, Sugar-cane mills.
 Hutchinson, W. N., 1906, July 20, Obtaining infusions.
 Hyan, J. P. L., & Granger, T. H., 1381, May 23, Heat- [ing, cooking, &c.].
 — J. P. L., & Granger, T. H., 1445, May 31, Carry- [ing away sewage, &c.].
 Hyatt, J. S. & J. W., & Perkins, J. A. (*Lake*), 1025, [Apr. 18, Plate for artificial teeth].
 — J. W. & J. S., & Perkins, J. A. (*Lake*), 1025, [Apr. 18, Plate for artificial teeth].
 Hyatt, Thaddeus, 1482, June 3, Illuminating gratings.
 — Thaddeus, 2116, Aug. 10, Gratings for roofs and [footways].
 — Thaddeus, 2118, Aug. 10, Inkstands.
 — Thaddeus, 2119, Aug. 10, Sheet metal.
 — Thaddeus, 3022, Nov. 9, Preparing chemical [compounds].
 — Thaddeus, 3124, Nov. 18, Fire-proof buildings.
 Hyatt, Theodore (*Johnson*), 437, Feb. 18, Illuminating [gratings].
 Hydes, T., & Bennett, J. & J. E., 54, Jan. 10, Cooling [and condensing].
 — T., & Bennett, J. E., 1161, May 1, Furnaces.
 — T., & Bennett, J. E., 1162, May 1, Blast engines.

I.

Ilbery, J. A., Isangk, B., Sullivan, J., & Davis, 1680, [June 27, Recording pressure, &c. of gases [and liquids, and speed of machines].
 Illston, G., & Shakespear, T., 1057, Apr. 21, Sewing- [machines].
 Imray, J., 1160, May 1, Locks and latches.
 Ingham, O., & Butterfield, I., 1100, Apr. 26, Finishing [fabrics].
 Inglis, W., & Spencer, J. F., 651, Mar. 11, Steam- [engines].
 Innes, A., 817, Mar. 27, Optical instrument for use in [artillery practice].
 Ireland, G., 3350, Dec. 11, Knives and forks.
 — J. & W. (*Pink*), 2548, Sep. 27, Cast or Besse- [mer steel ingots].
 — W. & J. (*Pink*), 2548, Sep. 27, Cast or Besse- [mer steel ingots].
 Ireland, W. C. (*Lake*), 789, Mar. 23, Tap for bottles, &c.
 Irvine, A. K., 1896, July 20, Mine lamps, signalling, &c.
 — R., 22, Jan. 5, Phosphatic fertilizers.
 — R., & Johnson, C. N., 1084, Apr. 24, Phosphate [materials].
 — R., & Price, A. P., 2209, Aug. 22, Paper.
 — R., Fleming, A. B., & MacLagan, R. C., 2196, [Aug. 21, Lubricants for wool].
 — R., MacLagan, R. C., Fleming, A. B., Turnbull, [G. V., & Salvesen, C., 1461, May 31, Lubri- [cants for wool].

Isaacs, W. B. & Moreau, E. (Lake), 2055, Aug. 8, [Sewing machines.
Isangk, B., Sullivan, J., Davis, J., & Ilbery, J. A., [1680, June 27, Recording pressure, &c. of [gases and liquids, and speed of machines.
Isherwood, T., 1123, Apr. 27, Loom shuttles.
Isherwood, T. (Lake), 3103, Nov. 16, Weaving shuttles, &c.
Isherwood, W., 1941, July 24, Heating, &c. railway [carriages.
Ives, H. R. (Hughes), 33, Jan. 6, Plumbago presses.

J.

Jackson, A. & G., 1000, Apr. 15, Healds or heddles.
 — *D.*, 972, Apr. 12, Sulphuric acid.
 — *G. & A.*, 1000, Apr. 15, Healds or heddles.
 — *H.*, 2603, Oct. 3, Drying grain, malt, &c.
 — *II.*, 2656, Oct. 7, Washing wool, &c.
 — *H.*, 2812, Oct. 21, Heating water by steam, &c.
 — *J.*, 513, Feb. 25, Spades, shovels, &c.
 — *T.*, 2604, Oct. 3, Pianoforte actions.
 — *W.*, 489, Feb. 24, Equilibrium pumps.
 — *W.*, 1308, May 15, Brick kilns, &c.
 — *W., & Zamoyski, J. M.*, 2372, Sep. 8, Railway, [&c. wheels and axles.
 — *W., & Zamoyski, J. M.*, 3399, Dec. 15, Axles [and crank-shafts.
 — *W. A.*, 2555, Sep. 28, Grinding saws, &c.
Jacob, A., 153, Jan. 21, Scent-bottles, lockets, &c.
 — *L. M.*, 3111, Nov. 17, Dress fastenings & ornaments.
Jagger, A., 363, Feb. 14, Combing fibres.
James, G. F., 2045, Aug. 3, Fuses for blasting, &c.
 — *J.*, 1133, Apr. 28, Sheet metal boxes.
Janicki, S., 788, Mar. 23, Floating docks.
 — *S.*, 1550, June 12, Floating docks.
Jaques, J. A., & Sterne, L., 3437, Dec. 19, Bags and [pouches.
Jarre, A. E. (Johnson), 2002, July 29, Fire-arms.
Jarvis, J., Robb, J., & Masson, A., 1568, June 14, Strain- [ing pulp.
 — *J. S.*, 3472, Dec. 22, Shirt-fronts.
Jaynor, A., & Smith, S. F., 2976, Nov. 4, Night signals.
Jeavons, J., 17, Jan. 4, Ascertaining the elongation, &c. [of metals under strains.
Jefferies, J. R., 1350, May 19, Ploughs.
 — *J. R., & Head, J.*, 588, Mar. 4, Cultivating im- [plements.
Jeffers, A. P. M., 2718, Oct. 13, Device for teaching [reading.
Jeffery, G. E., & Luke, R., 260, Jan. 31, Engines and [boilers.
Jeffreys, J., 450, Feb. 21, Sun-blinds.
Jenkins, J. & L. (Lake), 3439, Dec. 19, Supporting, &c. [vehicle seats.
Jenkins, J. J., 2147, Aug. 15, Tin and terne plates.
 — *J. J.*, 3413, Dec. 16, Tin and terne plates.
 — *J. J., & Madge, H. J.*, 954, Apr. 11, Tin and [terne plates.
Jenkins, L. & J. (Lake), 3439, Dec. 19, Supporting, &c. [vehicle seats.
Jennings, J. G., 229, Jan. 28, Supplying water.
 — *J. G.*, 1341, May 18, Receptacles for waste [waters.
 — *T.*, 400, Feb. 16, Safety-valves.
Jensen, P. (Erichsen), 1690, June 28, Materials for [roofing.
 — *P. (Schmidt)*, 3082, Nov. 15, Ploughing im- [plements.

Jenty, A. D. B. (Newton), 750, Mar. 20, Roadways, [pavements, &c.
Jermain, T. D. (Gordon), 2369, Sep. 7, Printing [machinery.
Jervis, A., 3285, Dec. 6, Water-supply apparatus.
 — *J.*, 1721, July 3, Cutlery.
Jessup, C. (Hughes), 2547, Sep. 27, Kettles for cooking.
Joannides, J. M., 1832, July 13, Grain & seed protector.
 — *J. M., & Adutt, L. M.*, 2683, Oct. 10, Ven- [tilating, &c. packed goods.
Jobbins, W. F., & Warth, A. (Lake), 293, Feb. 2, Cut- [ting cloth, &c.
Jobson, E. W., 453, Feb. 22, Ovens and furnaces.
Jochumsen, N., 2207, Aug. 22, Valves for pumps, &c.
Johnson, C. G., 3032, Nov. 9, Drying bricks, &c.
 — *C. N., & Irvine, R.*, 1084, Apr. 24, Phosphatic [materials.
 — *E.*, 2004, July 31, Fire-arms.
 — *G., & Mackinder, W.*, 1694, June 28, Ploughs [and cultivators.
 — *H., & Pratt, D.*, 2176, Aug. 18, Thimbles.
 — *H. A. (Smart)*, 2282, Aug. 30, Paint.
 — *J.*, 3182, Nov. 24, Invalid bedsteads.
 — *J., & Jones, W.*, 879, Apr. 3, Lubricating [machinery.
 — *J. H. (Merrill)*, 11, Jan. 3, Lamps and [burners.
 — *J. H. (Wheeler)*, 388, Feb. 15, Bars, rails, [tubes, &c.
 — *J. H. (Hyatt)*, 437, Feb. 18, Illuminating [gratings.
 — *J. H. (Reckendorfer)*, 498, Feb. 24, Pencils.
 — *J. H. (Brown)*, 532, Feb. 27, Gunpowder.
 — *J. H. (Tuft & Armbruster)*, 533, Feb. 28, [Sand-paper, &c.
 — *J. H. (Drown)*, 633, Mar. 9, Sewing um- [brellas, &c.
 — *J. H. (Browne & Hope)*, 741, Mar. 18, Break- [ing stones, &c.
 — *J. H. (Nes)*, 866, Mar. 31, Iron and steel.
 — *J. H. (Fish)*, 897, Apr. 4, Packings for pistons, &c.
 — *J. H. (Schmid)*, 906, Apr. 5, Motive-power [engine or pump.
 — *J. H. (Wells)*, 949, Apr. 11, Button-holes.
 — *J. H. (Albrecht)*, 968, Apr. 12, Clothes wringers.
 — *J. H. (Caleagno)*, 1023, Apr. 18, Composing [and translating secret correspondence.
 — *J. H. (Merrill)*, 1178, May 2, Lamp burners.
 — *J. H. (Warden)*, 1387, May 23, Transporting [liquids in bulk.
 — *J. H. (Hill & Thumm)*, 1450, May 31, Heating.
 — *J. H. (Warden)*, 1578, June 14, Ships.
 — *J. H. (Smith & Worsdell)*, 1646, June 22, [Spark arresters.
 — *J. H. (Derogy)*, 1852, July 14, Spectacles, &c.
 — *J. H. (Adamson)*, 1853, July 15, Treating wood, [&c. for paper stock.
 — *J. H. (Jarre)*, 2002, July 29, Fire-arms.
 — *J. H. (De Langlade)*, 2081, Aug. 7, Utilizing [gases from blast furnaces.
 — *J. H. (Leconte)*, 2082, Aug. 7, Beer.
 — *J. H. (Adamson)*, 2168, Aug. 17, Treating [fibres, &c.
 — *J. H. (Nimmo, Moran, Stausse & Ensinger)*, [2174, Aug. 18, Looms; transmitting motion.
 — *J. H. (Perreaux)*, 2208, Aug. 22, Velocipedes.
 — *J. H. (Berryman)*, 2218, Aug. 23, Feed-water [apparatus.
 — *J. H. (Collingridge & Stephen)*, 2261, Aug. 28, [Generating steam.
 — *J. H. (Dunk)*, 2300, Aug. 31, Multiple color [printing.

Johnson, J. H. (*Lobdell*), 2348, Sep. 6, Casting chilled [rolls].
 — J. H. (*La Société Industrielle Suisse*), 2349, [Sep. 6, Fire-arms].
 — J. H. (*Sellers*), 2612, Oct. 3, Puddling iron.
 — J. H. (*Clausolles*), 2613, Oct. 3, Water-meters.
 — J. H. (*Larue*), 2615, Oct. 3, Ordnance and small [arms].
 — J. H. (*French*), 2668, Oct. 9, Lanterns; attaching glass vessels.
 — J. H. (*Closson*), 2711, Oct. 13, Shearing [animals].
 — J. H. (*Pilon, Pilon & Pilon*), 2803, Oct. 20, [Disintegrators].
 — J. H. (*Reckendorfer*), 2830, Oct. 23, Pencil and [eraser].
 — J. H. (*Morgan & McMullan*), 2853, Oct. 25, [Roving frames].
 — J. H. (*Seville*), 2908, Oct. 30, Paving and asphalting roads, &c.
 — J. H. (*Grant*), 2944, Nov. 2, Disengaging [ships' boats].
 — J. H. (*Jordery & Paschkoff*), 3043, Nov. 10, [Solidifying oils, &c.].
 — J. H. (*Denans*), 3153, Nov. 21, Filtering, &c. [water].
 — J. H. (*Forster*), 3178, Nov. 23, Artificial [dentures].
 — J. H. (*Sellers*), 3196, Nov. 25, Iron & steel.
 — J. H. (*Bañolas et Cie*), 3259, Dec. 1, Extinguishing fires.
 — J. H. (*Muller*), 3289, Dec. 6, Kilns or ovens.
 — J. H. (*Westerman*), 3423, Dec. 18, Steam [generators].
 — J. H. (*Colton*), 3507, Dec. 28, Carrying & [discharging loads].
 — J. H. (*Browne & Hope*), 3508, Dec. 28, Stone-breakers, &c.
 — J. R., 1378, May 23, Lubricating compounds.
 Johnson, M. (*Hull*), 1313, May 15, Cultivating implement, &c.
 Johnson, R., 617, Mar. 8, Steering & manoeuvring ships.
 — R., 2391, Sep. 11, Asphalte paving.
 — S., & Telling, W. A., 469, Feb. 22, Dry gas [meters].
 Johnston, T. B., 146, Jan. 20, Treasure-safe for ships.
 Johnstone, J., & Kenworthy, W. E., 1127, Apr. 28, Consuming smoke.
 Jones, C., & Hodgart, J., 1785, July 7, Pressing cotton, &c.
 Jones, D., 2620, Oct. 4, Generating and applying vapours, &c.
 — Edward, 1617, June 20, Metallic cartridge cases.
 — Edward, 2097, Aug. 9, Metallic cartridge cases.
 — Edward, 2181, Aug. 19, Cotton gins.
 — Edward, 3018, Nov. 8, Metallic cartridge cases.
 Jones, Edward (*Macarthur*), 415, Feb. 17, Cotton gins.
 Jones, Edward, & Gray, A., 2103, Aug. 10, Working [pumps].
 — Edward G. & G., 3134, Nov. 20, Hot-blast [furnaces].
 — Enoch, 3165, Nov. 22, Fishing nets, &c.
 — F. F., 3174, Nov. 23, Smelting oxides of iron.
 — F. R., & Bell, A., 1477, June 3, Mechanical reciprocal motion.
 — G. & E. G., 3134, Nov. 20, Hot-blast furnaces.
 — H., 3186, Nov. 24, Measuring can.
 — L., & Hacking, T., 521, Feb. 27, Steam-boilers.
 — James, 189, Jan. 25, Cutting cigars, tobacco, &c.
 — James, 1373, May 22, Coffins.
 — James G., 2456, Sep. 18, Sewing-machines.
 — John M., 1961, July 26, Dressing hides, skins, & [leather].

Jones, Joseph, 3373, Dec. 13, Felting or fulling machines.
 — Richard, & Oates, W. H., 3381, Dec. 14, Carding-engines.
 — Richard L., & Brown, W. A., 1059, Apr. 22, [Matches].
 — Robert L., 1275, May 11, Clocks.
 Jones, S., & Lawrence, E. D. (*Lake*), 2426, Sep. 14, Operating sewing machines.
 — S., Smith, W. H., & Weaver, J. H. (*Lake*), 294, [Feb. 2, Electro-motors].
 Jones, W., & Johnson, J., 879, Apr. 3, Lubricating machinery.
 Jordan, J., 1719, July 3, Furnaces.
 — J., 2969, Nov. 4, Steam-boilers.
 Jordery, C. A., & Paschkoff, N. M. (*Johnson*), 3043, [Nov. 10, Solidifying oils, &c.].
 Jordesou, C. C. (*Lake*), 1202, May 3, Windlasses.
 Jouan, L. E., & Le Goffie, P. M. (*Gedge*), 2503, Sep. 22, [Shoe and gaiter].
 Jouet-Pastré, A. M. (*Newton*), 3187, Nov. 24, Steam-generators.
 Joy, D., & Breckon, J. R., 2743, Oct. 16, Screening coal.
 Jubelin, J. (*Hugon*), 1344, May 19, Wire netting, [fences, &c.].
 Jullien, F. H. (*Hammond*), 3392, Dec. 14, Moveable [stamps].
 Jupp, H. J., 3338, Dec. 11, Paving composition.

K.

Kaeuffer, P., 644, Mar. 10, Generating steam; heating, &c. liquids.
 — P. E., 1794, July 8, Freezing, &c. by compressed air, & utilising heat.
 Kaiser, F., 2068, Aug. 5, Bakers' ovens.
 Kallmeyer, G., 2827, Oct. 23, Sewing-machines.
 Kästner, G. A. (*Wise*), 1095, Apr. 25, Horse-shoes.
 Kay, T. B., 3121, Nov. 18, Combing & preparing fibres.
 Kaye, J., 2457, Sep. 18, Factory lamps.
 Kearns, J. H., 2605, Oct. 3, Blotting pad book diary.
 Keats, J., 1542, June 10, Sewing-thread.
 Keegan, V. E. (*Newton*), 1422, May 27, Paper-making.
 Keenan, J. (*Rath*), 1688, June 28, Plaited fabrics.
 Keevil, K., 1126, Apr. 28, Milking cows.
 Kelly, L. A., & Tipple, C. H., 1999, July 29, A new [game, "Je de joie."].
 Keirby, E., 140, Jan. 19, Signals.
 Kelley, E. W., 3498, Dec. 28, Horse-nails.
 Kellogg, H. (*Hughes*), 3473, Dec. 22, Drawing or rolling [rods, &c.].
 — J. F., & Cutler, E. A. (*Haseltine*), 21, Jan. 5, [Sewing machines].
 Kelly, R. R., Bell, J. C., & Gregg, W. D., 2845, Oct. 24, [Utilizing gas liquor].
 Kemmer, C. T. (*Lake*), 234, Jan. 28, Decorating walls, &c.
 Kemp, R. W. (*Parry*), 3075, Nov. 15, Oil lamps.
 Kempe, A. & W., 883, Apr. 3, Tenting & drying machines.
 — W. & A., 883, Apr. 3, Tenting & drying machines.
 Kendall, J., 738, Mar. 18, Hot-water apparatus.
 — J. D., & Brydon, R., 884, Apr. 3, Signal indicators.
 — W. J., & Moorhouse, S., 2727, Oct. 14, Railway [signalling].
 Kennan, J. & T., 1285, May 12, Strained wire fences.
 — T. & J., 1285, May 12, Strained wire fences.
 Kennard, H. M., 581, Mar. 4, Driving screw-piles.
 — H. M., 582, Mar. 4, Bridges, viaducts, piers, &c.
 Kent, A., 1565, June 13, Charging & discharging gas [retorts].
 — G., 813, Mar. 25, Consuming smoke.
 — J., 606, Mar. 7, Rack for blind cords.

Kent, J., 614, Mar. 8, Brushes.
 — W. H. (King), 2505, Sep. 22, Plaiting materials.
 Kenworthy, W. E., & Johnstone, J., 1127, Apr. 28, Con-
 [suming smoke.
 Kenyon, H., & Swindells, I., 79, Jan. 12, Acids.
 — J., 346, Feb. 10, Looms.
 — J. & J. H., & Entwistle, E., 14, Jan. 4, Railway
 [signals.
 — J. H. & J., & Entwistle, E., 14, Jan. 4, Railway
 [signals.
 Kerr, W. H., & Brydges, C. J. (Lake), 1647, June 22,
 [Rifles.
 Kesterton, H., 706, Mar. 16, Working railway brakes.
 — H., 707, Mar. 16, Casting hollow ingots.
 Kierzkowski, C. F. de, 193, Jan. 25, "Buffing," and
 [coupling gear, &c. of railways.
 Kilner, C. & T., 2882, Oct. 27, Stoppers for bottles, &c.
 — J. M., 2543, Sep. 27, Controlling cables & chains.
 — T. & C., 2882, Oct. 27, Stoppers for bottles, &c.
 Kilpatrick, D., & Cooke, R. H., 3394, Dec. 14, Applying
 [galvanism.
 Kimball, L. W., Mallory, W. H., Butterfield, E. L. &
 [Allen, R. N. (Newton), 1370, May 22, Rail-
 [way wheels.
 King, G. E. (Hunt), 2505, Sep. 22, Plaiting materials.
 King, H. J. H., 629, Mar. 9, Feeding carding machines, &c.
 — H. J. H., 824, Mar. 28, Motive-power engines.
 — J., 1925, July 22, Locks for carriage doors.
 — J., 3171, Nov. 23, Signalling in trains.
 — J., Crofts, J., & Dawson, R., 1683, June 27, Comb-
 [ing fibres.
 — J. T. (Lauder), 3028, Nov. 9, Utilizing tin plate
 [waste liquor.
 — J. W., 1248, May 9, Seed-drills.
 Kinne, C. W. (Lake), 1713, July 1, Valves of water meters.
 Kinnear, F., & Martin, E., 1282, May 12, Medicated flannel
 [bands.
 Kinsey, H., 2614, Oct. 3, Steam-winch, &c.
 Kirk, A. C., 3064, Nov. 14, Steering-engines.
 — J., 1286, May 12, Alarm for steam-boilers.
 Kirkham, T. N., Ensom, V. F., & Spence, G., 645, Mar. 10,
 [Scouring, bleaching, and dyeing fibres.
 Kittoe, G. D., & Brotherhood, P., 143, Jan. 20, Regulating,
 [&c. flow of fluids.
 — G. D., & Brotherhood, P., 648, Mar. 11, Steering
 [vessels; valves.
 Kleritj, L., 2335, Sep. 4, Blasting cartridges.
 Klerity, L., 2032, Aug. 2, Gravitating rope bores.
 Kloen, W., 1219, May 5, Scale-beams, balances, &c.
 Klosak, M. (Leonardt), 3470, Dec. 22, Lubricators.
 Knab, D. C., 2056, Aug. 8, Animal and fish refuse for
 [manure, &c.
 Knight, J. J., 3261, Dec. 2, Carbonates and phosphates
 [of soda and potash; muriatic acid, &c.
 Knight, S. P. (Newton), 1103, Apr. 26, Electrotyping moulds.
 Knight, T. G., 2059, Aug. 4, Self-acting barrel tilters.
 — T. W., Colls, F. W., Atkinson, H., & Michael, J. J.,
 [1650, June 23, Paper-pulp.
 Knowelden, J., & Dilnutt, W. H., 3101, Nov. 16, Furnaces.
 Knowland, G. F., & Smith, J., 2367, Sep. 7, Spring-
 [mattresses, &c.
 Knowles, G., 2108, Aug. 10, Combing fibres.
 — S., & Ashworth, J. & R., 927, Apr. 8, Printed
 [fabrics.
 — T., 894, Apr. 4, Sizing yarn.
 — W., 343, Feb. 9, Lubricating axles & journals.
 — W., & Hetherington, J. M., 228, Jan. 28, Ren-
 [dering roller surfaces true.
 — W., & Hetherington, J. M., 1130, Apr. 28,
 [Clearing spinning rollers.
 Kochs, W. E., 2939, Nov. 2, Steam-boilers.
 — W. E., 3076, Nov. 15, Combing fibres.

Königs, E., 853, Mar. 30, Pyrites; sulphates of soda.
 — E., 1305, May 15, Treating pyrites, &c.
 — E., & Henderson, J., 1642, June 22, Sulphate of
 [soda, hydrochloric acid, &c.
 Körting, E., 1055, Apr. 21, Feeding steam-boilers.
 — E., 3225, Nov. 29, Steam-engines.
 Kotzo, P. (Garrett, Garrett, & Garrett), 3084, Nov. 15,
 [Steam-engines.
 Kousakoff, A., & Tiranoff, J. & N. (Smith), 3164, Nov. 22,
 [Railways and rolling stock.
 Krall, C., & Boehringer, J. G., 214, Jan. 27, Retarding,
 [&c. locomotion and motion.
 Krausse, H. (Hughes), 2847, Oct. 24, Hydrometers.
 Kraut, K. (Abel), 873, Apr. 1, Glycerine.
 Krips, B., & Ransome, F., 2293, Aug. 31, Mill-stones.
 Kromschroeder, J. F. G., 2662, Oct. 7, Generating gas.
 Krueger, E. C. H., 257, Jan. 31, Pens and penholders.
 Kuhlmann, H. (Hughes), 3214, Nov. 28, Pegged boots &
 [shoes.
 Kuttner, J., 1875, July 18, Weaving corsets, &c.

L.

La Brèche-Viger, L. (Lake), 3246, Nov. 30, Steel.
 Lacey, F., 2552, Sep. 28, Ventilating rooms.
 Lackersteem, J. F., & Christopher, J. S., 282, Feb. 2, Screws
 [and screw-drivers.
 — J. F., & Bromfield, J. C., 1004, Apr. 15,
 [Cigarette papers.
 Laemmel, M. (Lake), 1464, June 1, Color-printing blocks.
 Lafage, A., 990, Apr. 14, Camp-bed.
 Lafferty, H. W. & R., 3322, Dec. 8, Centrifugal machines.
 — R. & H. W., 3322, Dec. 8, Centrifugal machines.
 Lagrange, J. V. P., 3180, Nov. 23, Purifying saccharine
 [juices.
 Laharpe, C. D. de, & Fouché, F. H. F. M. (Tongue), 2006,
 [July 31, Steam-boilers.
 Lahousse, H. J. (Love), 1963, July 26, Paper-pulp.
 Laight, C., & Welch, J., 290, Feb. 2, Needle cases, &c.
 — C., & Welch, J., 1287, May 12, Needle cases, &c.
 Lainé, A. (Gedge), 1723, July 3, Destroying insect larvae.
 Lair, J. A. F., & Bilange, C. R. (Wilson), 1314, May 16,
 [Sugar.
 Lake, W. R. (Osborne), 7, Jan. 2, Harvesting machines.
 — W. R. (Gard & Gard), 70, Jan. 11, Moulding bricks.
 — W. R. (Gilman), 141, Jan. 19, Refining & ageing
 [liquors.
 — W. R. (Devlan, Wendell & Tasker), 142, Jan. 19,
 [Telegraph cables.
 — W. R. (Kenner), 234, Jan. 28, Decorating walls, &c.
 — W. R. (Weiler), 246, Jan. 30, Combs for worsted
 [machinery.
 — W. R. (Warth & Jobbins), 293, Feb. 2, Cutting
 [cloth, &c.
 — W. R. (Jones, Smith & Weaver), 294, Feb. 2,
 [Electro-motors.
 — W. R. (Scheller), 309, Feb. 4, Condensed soup.
 — W. R. (Rogers), 339, Feb. 9, Wire fabrics for
 [mattresses, &c.
 — W. R. (Main), 340, Feb. 9, Screw-propelled boats, &c.
 — W. R. (Mayor & Chatterton), 362, Feb. 14, Spin-
 [ning flyers.
 — W. R. (Fitts), 549, Mar. 1, Regulating steam
 [pressure in drying, &c.
 — W. R. (Clemens), 602, Mar. 6, Safety-valve & whistle.
 — W. R. (McIlvaine, Lloyd & Firth), 689, Mar. 15,
 [Printers' ink.
 — W. R. (Harris), 727, Mar. 17, Sewing-machines.
 — W. R. (Dodge & Dodge), 755, Mar. 20, Fire-arms.
 — W. R. (Ireland), 789, Mar. 23, Tap for bottles, &c.

Lake, W. R. (*Armstrong*), 831, Mar. 27, Garters.
 — W. R. (*Nilson*), 826, Mar. 28, Feeding paper in [printing].
 — W. R. (*Cameron*), 838, Mar. 29, Steam-pumps, [gas exhausters, &c].
 — W. R. (*Curtis & Graham*), 842, Mar. 29, Revolving [ovens].
 — W. R. (*Woodson*), 910, Apr. 5, Furnaces & boilers.
 — W. R. (*Peters*), 933, Apr. 8, Furnaces and flues.
 — W. R. (*Winkler & Zitowitsch*), 943, Apr. 10, [Utilizing exhaust steam].
 — W. R. (*Peters*), 1007, Apr. 15, Raising, forcing, [and exhausting air, gas, &c].
 — W. R. (*McConnell*), 1015, Apr. 17, Preparing fibres.
 — W. R. (*Smith*), 1017, Apr. 17, Axles & axle boxes.
 — W. R. (*Hyatt, Hyatt & Perkins*), 1025, Apr. 18, [Plate for artificial teeth].
 — W. R. (*Goodes*), 1038, Apr. 20, Photographs on [glass].
 — W. R. (*Smith*), 1058, Apr. 21, Sewing-machines.
 — W. R. (*Prusha & Wales*), 1078, Apr. 22, Boots [and shoes].
 — W. R. (*Glaister*), 1074, Apr. 22, Sawing stone.
 — W. R. (*Capron*), 1082, Apr. 24, Turbine water- [wheels].
 — W. R. (*Deverell*), 1083, Apr. 24, Utilizing wave [power].
 — W. R. (*Hooper*), 1096, Apr. 25, Concentrating ores.
 — W. R. (*Goodchild*), 1107, Apr. 27, Joiners' clamps.
 — W. R. (*Brown & Buxton*), 1128, Apr. 28, Securing [pocket books, &c].
 — W. R. (*Beckwith*), 1201, May 3, Sewing-machines.
 — W. R. (*Jordeson*), 1202, May 3, Windlasses.
 — W. R. (*Trudeau*), 1207, May 4, Glass tubes or globes.
 — W. R. (*Comstock*), 1216, May 5, Hair cloth substitute.
 — W. R. (*Perkins*), 1323, May 16, Steam-boilers.
 — W. R. (*Brandt, Lehr, Fisher & Brecht*), 1327, [May 16, Steam-engines].
 — W. R. (*McDaniel*), 1355, May 19, Covering leather.
 — W. R. (*Berrett*), 1365, May 20, Nitro-glycerine.
 — W. R. (*Pratt*), 1375, May 22, Paddle wheels.
 — W. R. (*Simpson*), 1388, May 23, Disintegrators.
 — W. R. (*Field & Andrews*), 1400, May 24, Telegraphs.
 — W. R. (*Bartlett*), 1432, May 29, Lamps.
 — W. R. (*Lefferts*), 1444, May 31, Printing telegraphs.
 — W. R. (*Laemmel*), 1464, June 1, Color-printing [blocks].
 — W. R. (*Foot & Randall*), 1474, June 2, Telegraphic [printing].
 — W. R. (*Scribner*), 1491, June 5, Harmoniums, &c.
 — W. R. (*Baker*), 1501, June 6, Journal boxes and [bearings].
 — W. R. (*Scott*), 1503, June 6, Hoisting machines.
 — W. R. (*Myers*), 1509, June 7, Pneumatic telegraphs.
 — W. R. (*Dyer*), 1510, June 7, Stamping metallic [articles, &c].
 — W. R. (*McFarland*), 1519, June 8, Pads for trusses.
 — W. R. (*Dyer*), 1520, June 8, Binding and securing [papers, &c].
 — W. R. (*Pullman*), 1523, June 8, Railway sleeping [carriages].
 — W. R. (*Pullman*), 1524, June 8, Railway hotel [carriages].
 — W. R. (*Sapp*), 1639, June 22, Sewing-machines.
 — W. R. (*Kerr & Brydges*), 1647, June 22, Rifles.
 — W. R. (*Hidden*), 1653, June 23, Tearing leather [into shreds].
 — W. R. (*Woods*), 1708, June 30, Ripping instrument [and wrench].
 — W. R. (*Kinne*), 1713, July 1, Valves of water-meters.
 — W. R. (*Salamon*), 1715, July 1, Lubricating com- [pound].

Lake, W. R. (*Bartlett*), 1796, July 8, Steam-boilers.
 — W. R. (*Howe & Somerville*), 1830, July 12, [Knitting-machines].
 — W. R. (*Lambert*), 1903, July 20, Burnishing edges [of heels].
 — W. R. (*Denis*), 1907, July 20, Governors.
 — W. R. (*Chisholm*), 1965, July 27, Converting steel.
 — W. R. (*Calkins*), 2044, Aug. 2, Railway vehicles [for cattle, &c].
 — W. R. (*Moreau & Isaacs*), 2055, Aug. 3, Sewing- [machines].
 — W. R. (*Barker*), 2092, Aug. 8, Sand papering ma- [chines].
 — W. R. (*De Wolfe*), 2106, Aug. 10, Covering wire.
 — W. R. (*Wittram*), 2138, Aug. 14, Dress protectors.
 — W. R. (*Hall & Van Blarcom*), 2150, Aug. 15, [Signalling].
 — W. R. (*Brett*), 2151, Aug. 15, Bale-ties.
 — W. R. (*Heery*), 2152, Aug. 15, Steaming and [cooling cloth].
 — W. R. (*Rider*), 2191, Aug. 19, Breaking and cubing [stone].
 — W. R. (*Gates*), 2214, Aug. 23, Looms.
 — W. R. (*Prevost & Barjon*), 2219, Aug. 23, Gal- [vanic batteries].
 — W. R. (*Cantowell*), 2226, Aug. 24, Roofing tiles.
 — W. R. (*Uiley & Ross*), 2238, Aug. 25, Electro- [magnetic motors].
 — W. R. (*Barret*), 2240, Aug. 25, Couch for apply- [ing clysters].
 — W. R. (*Avery*), 2284, Aug. 30, Spinning wool.
 — W. R. (*Robertson*), 2298, Aug. 31, Treating hides.
 — W. R. (*Laurence*), 2360, Sep. 6, Pickle-forks.
 — W. R. (*Eaton*), 2403, Sep. 12, Iron and steel.
 — W. R. (*Baldwin*), 2406, Sep. 12, Compressing [cotton, hay, &c].
 — W. R. (*Brown*), 2417, Sep. 14, Stuffing boxes and [packing].
 — W. R. (*Jones & Lawrence*), 2426, Sep. 14, Ope- [rating sewing-machines].
 — W. R. (*Gassett*), 2439, Sep. 15, Electro-magnetic [engines].
 — W. R. (*Hershey, Geer, Dudley & Gaggin*), 2467, [Sep. 19, Torsion springs & their bearings].
 — W. R. (*Woodley*), 2485, Sep. 21, Boots and shoes.
 — W. R. (*Vandemark & Scharf*), 2554, Sep. 28, [Artificial asphalt].
 — W. R. (*Potter*), 2599, Oct. 2, Inflammable gases.
 — W. R. (*Waters*), 2607, Oct. 3, Governors.
 — W. R. (*Gould*), 2651, Oct. 6, Grain elevators.
 — W. R. (*Saunders*), 2671, Oct. 9, Boot and shoe [fastenings].
 — W. R. (*Champney & Hayward*), 2687, Oct. 10, Dies.
 — W. R. (*Roots & Roots*), 2691, Oct. 11, Forge, tuyere [and fire-bed].
 — W. R. (*Garrick*), 2699, Oct. 11, Household imple- [ments].
 — W. R. (*Lang*), 2719, Oct. 13, Washing clothes, &c.
 — W. R. (*Wiegand*), 2793, Oct. 19, Pistons and slide- [valves].
 — W. R. (*Catlin*), 2828, Oct. 23, Ink-stands.
 — W. R. (*Procopé & Stenman*), 2851, Oct. 24, Sewing- [machines].
 — W. R. (*Trawnitzek*), 2865, Oct. 25, Feeding guns.
 — W. R. (*Thomas*), 2875, Oct. 26, Preserving wood.
 — W. R. (*Cruikshank & Smith*), 2911, Oct. 30, [Packing].
 — W. R. (*Alexander, Clarke & Clarke*), 2936, Nov. 1, [Ferrules].
 — W. R. (*Cramp*), 2984, Nov. 6, Sewing-machine [attachment].
 — W. R. (*Bell*), 3052, Nov. 11, Smiths' forges.

- Lake, W. R. (Pease)**, 3102, Nov. 16, Underlinings for carpets.
 — **W. R. (Isherwood)**, 3103, Nov. 16, Weaving [shuttles, &c.]
 — **W. R. (Bartlett)**, 3217, Nov. 28, Lamps or lanterns.
 — **W. R. (La Brèche-Viger)**, 3246, Nov. 30, Steel.
 — **W. R. (Young & Young)**, 3256, Dec. 1, Sawing stone.
 — **W. R. (Butler)**, 3264, Dec. 2, Bale-tie or fastening.
 — **W. R. (Schwartz)**, 3292, Dec. 6, Rotary steam [engine].
 — **W. R. (Blake)**, 3323, Dec. 8, Sewing boots & shoes.
 — **W. R. (Wardwell)**, 3343, Dec. 11, Sewing-machine [table].
 — **W. R. (Webster & Hall)**, 3349, Dec. 11, Disintegrate [grating, &c.]
 — **W. R. (Smith)**, 3366, Dec. 12, Galvanic batteries.
 — **W. R. (Jenkins & Jenkins)**, 3439, Dec. 19, Super [porting, &c. vehicle seats].
 — **W. R. (Mason)**, 3464, Dec. 21, Metal rods & wires.
 — **W. R. (Danks)**, 3465, Dec. 21, Supplying fuel to [furnaces].
 — **W. R. (Hiler)**, 3466, Dec. 21, Copper-covered wire.
Lalande, F. de, & Schützenberger, P., 3377, Dec. 13, [Indigo printing and dyeing].
Lamb, J., 3089, Nov. 15, Carpet looms.
 — **J. W., & Lowe, S.**, 3068, Nov. 14, Looped fabrics.
Lambert, C., 1239, May 8, Feeding sheep, lambs, &c.
 — **J. N.**, 1124, Apr. 27, Lithographic stones.
Lambert, R. C. (Lake), 1903, July 20, Burnishing edges [of heels].
Lambert, T., 399, Feb. 16, Pianofortes.
Lamie, E., & Folacci, P. (Smith), 2395, Sep. 11, Motive [power].
Lamm, E. (Armour), 517, Feb. 25, Ammonical gas-engine.
Lancaster, W., 462, Feb. 22, Sizing machines, &c.
Landry, A. E. C., 2601, Oct. 3, Confectionery.
Laue, C. B., 2003, July 29, Tramways & tram-car wheels.
 — **D., & Still, A. H.**, 2655, Oct. 6, Gas.
 — **J. W.**, 3351, Dec. 11, Stays or corsets.
 — **T., & Porter, R.**, 201, Jan. 25, Gas.
Lang, F., & Reichert, C., 2342, Sep. 5, Pressure gauges.
Lang, M. (Lake), 2719, Oct. 13, Washing clothes, &c.
Langford, G. F., 2928, Nov. 1, Poison bottles.
Langlade, J. E. A. B. de (Johnson), 2081, Aug. 7, [Utilizing gases from blast furnaces].
Langshaw, F. S., 2919, Oct. 31, Oiling cylinders or [chambers].
Lankester, W. G., 3242, Nov. 30, Heating and ventilating [buildings].
La Peyrouse, L. L. A. E. P. de, 2260, Aug. 28, Treating [fatty matters].
Large, H., 1692, June 28, Bricks, tiles, &c.
 — **H.**, 3167, Nov. 22, Colored bricks, tiles, &c.
Larkin, H., & White, W., 23, Jan. 5, Sodium and [potassium].
 — **H., & White, W.**, 3311, Dec. 7, Reducing chlo- [rides].
 — **H., Leighton, A., & White, W.**, 1357, May 20, [Bleaching powder].
 — **H., Leighton, A., & White, W.**, 1518, June 8, [Iron and steel].
Larsen, J. D., 433, Feb. 18, Fastenings for rails & sleepers.
 — **J. D.**, 636, Mar. 10, Lamps.
 — **J. D.**, 2165, Aug. 17, Brakes for carriages.
Larue, J. S. (Johnson), 2615, Oct. 3, Ordnance and [small arms].
Lascelles, W. H., 72, Jan. 11, Ventilating structures.
Laterrière, J. A. M. de (Henry), 464, Feb. 22, Bedsteads.
Lathrop, L. W. (Clark), 1976, July 27, Sewing- [machines].
Latour, H., 3063, Nov. 14, Picking, &c. cordage; combing [fibres].
Lauder, G. (King), 3028, Nov. 9, Utilizing tin plate [waste liquor].
Launay, A. Mazé, & Pellicur, J. (Morris), 3400, Dec. 15, [Calcining kelp].
 — **A. Mazé, & Pellicur, J. (Morris)**, 3448, Dec. 20, [Iodine and bromine].
Lawrence, H. (Lake), 2360, Sep. 6, Pickle-forks.
Lavater, M. L. J., & Michel, A. (Clark), 2910, Oct. 30, [Spinning rollers].
Lavers, W. L., 1964, July 26, Reaping-machines.
Law, J., & Bennison, M., 1312, May 15, Building hoists.
 — **J., & Crossley, A.**, 1191, May 3, Mules for spinning.
Lawes, T., 1660, June 24, Forking and pulverizing land.
Lawrence, C. L. (Akins), 240, Jan. 30, Padlocks.
Lawrence, E. D., & Jones, S. (Lake), 2426, Sep. 14, [Operating sewing-machines].
Lawrence, G., Lingard, J., & Richards, J., 935, Apr. 8, [Jewellery].
Lawson, H. G. (Goodwin), 2870, Oct. 26, Transmitting [power].
 — **H. G. (Goodwin)**, 2872, Oct. 26, Harvesting [machines].
 — **H. G. (Goodwin & Sanford)**, 3024, Nov. 9, Canal [boats].
 — **J.**, 1014, Apr. 17, Preparing fibres for combing.
Laybourne, R., 2351, Sep. 6, Straightening, &c. rails, [bars, &c.].
Laycock, W., 1405, May 25, Calico printing.
 — **W., & Riley, J.**, 1030, Apr. 19, Printing [fabrics, &c.].
 — **W. S.**, 979, Apr. 13, Weaving.
 — **W. S.**, 1310, May 15, Pressing oil from seeds.
Leachman, W. B., & Nussey, G. H., 3230, Nov. 29, [Pressing, &c. fabrics].
Leadbetter, J., 2290, Aug. 31, Brewing, cooking, &c.
Leask, R. H., 127, Jan. 18, Speed regulators.
Leatham, W., 2726, Oct. 14, Ambulance carriages, &c.
Leather, J. K., 2308, Sep. 1, Bleaching powder.
Leblond, P. H., & Mulot, A. (Clark), 3277, Dec. 5, [Steam-engines].
Le Bret, B. (Gedge), 2171, Aug. 18, Signalling on trains.
Leckie, R. G. (Haseltine), 909, Apr. 5, Concentrating [brine, &c.].
Leclanché, G. L., 3521, Dec. 30, Electrical contact for [clockwork].
Lecloux, P., 2842, Oct. 24, Fastening for windows, &c.
Leconte, E. (Johnson), 2082, Aug. 7, Beer.
Lec, E. & H. N., 684, Mar. 15, India-rubber wheel tires.
 — **H. N. & E.**, 684, Mar. 15, India-rubber wheel-tires.
 — **J. C. F.**, 1521, June 8, Tipping railway wagons, &c.
 — **R. B., & Rogers, S. A.**, 1597, June 16, Metal pillars, [posts, &c.].
Leech, E., & Smith, S., 2373, Sep. 8, Smoke-consuming [furnaces].
Lees, H., 455, Feb. 22, Ordnance.
 — **S.**, 2565, Sep. 28, Safety-valves.
Leetch, J., 3244, Nov. 30, Detergent compounds.
Lefevre, H., 1665, June 24, Effecting calculations.
Lefferts, M. (Lake), 1444, May 31, Printing telegraphs.
Leffler, C. J. L., 598, Mar. 6, "Spiegel-eisen."
 — **C. J. L.**, 2317, Sep. 2, "Spiegel-eisen."
Leggo, W. A. (Haseltine), 471, Feb. 22, Spectacles or eye [glasses].
 — **W. A. (Haseltine)**, 518, Feb. 25, Electro-typing.
 — **W. A. (Haseltine)**, 540, Feb. 28, Photo-electro- [typing].
 — **W. A. (Haseltine)**, 2254, Aug. 28, Motive-power.
 — **W. A., & Desbarats, G. E. (Gilbee)**, 1409, May 25, [Photography].
Le Goffie, P. M., & Jouan, L. E. (Gedge), 2503, Sep. 22, [Shoe and gaiter].
Le Harivel, A. L., 3418, Dec. 18, Elastic steel wheels.

- Lehr, R., Fisher, C. G., Brecht, T. C., & Brandt, J.* [(Lake), 1327, May 16, Steam-engines.
Leigh, E., 3411, Dec. 16, Harbours, breakwaters and [docks.
Leighton, A., White, W., & Larkin, H., 1357, May 20, [Bleaching powder.
 — *A., White, W., & Larkin, H.*, 1518, June 8, [Iron and steel.
Leloup, D. C. E. (Libotte), 1307, May 15, Hanging, &c. [gates.
Lemarchand, V. E., Houbé, A. Z., & Guinet, A., 1594, [June 16, Cutting wood.
Le Mat, F. A. (Smith), 3218, Nov. 28, Revolvers, &c.
 — *F. A. (Smith)*, 3224, Nov. 29, Rifling firearms, &c.
Lemoine, L., & Paget, F. A., 1257, May 10, Springs.
Leneven, A., 1020, Apr. 18, Hats, bonnets, &c.
Leng, J. S. (Stiff), 231, Jan. 28, Bale-ties.
Leugèlle, A., Bouttier, L., & Vincent, C. (Smith), 2363, [Sep. 7, Clips or shears.
 — *A., & Bouttier, L. (Smith)*, 2867, Oct. 25, [Wheels and axles.
Lennig, C. (Vaughan), 2269, Aug. 29, Stannate of soda.
Lenmy, C., 958, Apr. 11, Raising, &c. carriage heads.
Lenoir, J. J. E. (Newton), 974, Apr. 12, Telegraphing.
Lenox, G. C. L., 2566, Sep. 28, Anchors.
Leonard, A. S., 1164, May 1, Woollen cloth.
Leonardt, F. (Klosak), 3470, Dec. 22, Lubricator.
Lepage, L. M. A., 3216, Nov. 28, Propelling carriages [and boats.
Leplay, J., Appleby, C. J., & Campbell, R., 2, Jan. 2, [Extracting saccharine matters.
Leroy, F. J. (Brookes), 1031, Apr. 19, Scouring and [rinsing wool.
Leslie, B., 2332, Sep. 4, Transporting railway trains across [rivers, &c.
Letourneux, C. H., & Spénard T. (Haseltine), 476, Feb. 23, [Combined knife and glass-cutter.
Levetzow, F. C. A. von, 931, Apr. 8, Flower-pots.
Lery, H., 1141, Apr. 28, Sash fasteners.
Lewis, C. C. (Newton), 2943, Nov. 2, Twine-cutters.
Lewis, D., Briggs, J., & Willan, R., 914, Apr. 6, Warping [and beaming.
Lewis, G. T. (Menzie), 1311, May 15, Manures.
Lewis, James, 1712, July 1, Metallic bedsteads, &c.
 — *John, & Parkin, I.*, 2885, Oct. 27, Studs for horse- [shoes.
 — *S. S.* 2468, Sep. 19, Paper for banknotes, &c.
Lewis, W. A. (Mills), 1877, July 18, Hollow axles, &c.
 — *W. A. (Mills)*, 1882, July 19, Wheels, &c. and lu- [bricating.
Lewtas, J., 1942, July 24, Lamps.
Lewthwaite, J., 39, Jan. 7, Dating railway & other tickets.
Leyland, J., & Davies, E., 2622, Oct. 4, Screw bolts & nuts.
Liardet, J. E., 2013, July 31, Spring link for cables, &c.
 — *J. E.*, 2611, Oct. 3, Working and protecting ord- [nance.
Libbey, H. (Bowie), 1664, June 24, Glass-blowers' moulds.
 — *W. L. (Bowie)*, 1570, June 14, Glass-blowers' [moulds.
Libotte, N. (Leloup), 1307, May 15, Hanging, &c. gates.
Lichtscheindl, J. (Crandall), 2690, Oct. 10, Mattresses, &c.
Lidderd, J., 1701, June 30, Railway chairs.
Liebich, I., & Paterson, W. W., 1633, June 21, Piano- [fortes.
Lightbown, H., 338, Feb. 9, Measuring, &c. paper hang- [ings.
Lilley, A., 1710, July 1, Lubricators.
Lindon, H., 574, Mar. 3, Metallic bale-bands.
Lindsay, J., Bell, T., & Urquhart, W. W., 306, Feb. 4, [Power-looms.
 — *R. B.*, 1436, May 30, Packing for steam-engines, [&c.
Lingard, J., Richards, J., & Lawrence, G., 935, Apr. 8, [Jewellery.
Lismann, A., 66, Jan. 11, Working metals.
Lister, J., 1532, June 9, Envelopes.
 — *S. C.*, 458, Feb. 22, Looms.
 — *S. C.*, 1116, Apr. 27, Spinning & treating yarns, &c.
 — *S. C.*, 1821, July 12, Looms.
 — *S. C.*, 2197, Aug. 21, Looms.
 — *S. C., & Reixach y Gispert, J.*, 1117, Apr. 27, Looms.
Liston, J. R., 487, Feb. 23, Glove for surgical operations.
Little, G., 2286, Aug. 30, Electric-telegraphs.
 — *G., & Eastwood, T. C.*, 1297, May 13, Combing [machinery.
 — *R. J.*, 38, Jan. 7, Communicating in trains.
Littlehales, A., 1995, July 29, Lockets, brooches, &c.
Livesey, J., 2385, Sep. 9, Asphalt, and its application.
Livingstone, W. (Clark), 2513, Sep. 23, Valve motions.
Livsey, P. J. (Florence Manufacturing Co.), 1304, May 15, [Mirrors.
 — *P. J. (Merrick)*, 1778, July 7, Sewing-machine [spools.
Llewellyn, J., 903, Apr. 5, Filters.
Lloyd, A., 514, Feb. 25, Farinaceous food and baking [powders.
 — *C. M.*, 3074, Nov. 15, Cutting wood tenons.
Lloyd, W. McC., Firth, F. J., & McIlvaine, C. (Lake), [689, Mar. 15, Printers' ink.
Lobdell, G. G. (Johnson), 2348, Sep. 6, Casting chilled [rolls.
Lobstein, E. E. de, 2623, Oct. 4, Coating & ornamenting [metals.
Lockhead, J., & Mathieu, C. A. (Gedge), 1910, July 21, [Ploughing.
Lockwood, W., 376, Feb. 15, Preventing incrustation in [steam-boilers.
 — *W., & Brown, W. H.*, 508, Feb. 25, Cast steel.
Lockyer, T. W., 2889, Oct. 27, Silk and other fabrics.
Lodge, J., 632, Mar. 9, Artificial fuel.
 — *J.*, 2717, Oct. 13, Artificial fuel.
Lomax, H. & J., 148, Jan. 20, Sewing-machines.
 — *J. & H.*, 148, Jan. 20, Sewing-machines.
Long, J. J., 134, Jan. 19, Cutting timber.
 — *R.*, 1552, June 12, Increasing circulation in boilers, [&c.
 — *R.*, 1709, July 1, Bridges & fire-doors of furnaces.
 — *R.*, 1717, July 3, Twin screw paddle-wheels.
 — *R.*, 2398, Sep. 12, Latches for doors, &c.
 — *R.*, 2563, Sep. 28, Freezing and refrigerating.
 — *R.*, 3414, Dec. 16, Engine governors.
Loomes, E., 1198, May 3, Boxes for matches, splints, &c.
Lorberg, W., 244, Jan. 30, Utilizing galvanizers' liquors.
 — *W.*, 245, Jan. 30, Soap.
 — *W.*, 1978, July 27, Soap.
Lord, J. & W., & Fenton, J., 709, Mar. 16, Spinning [cotton waste, &c.
 — *R. H., & Parkinson, C.*, 613, Mar. 8, Carding- [engines.
 — *W. & J., & Fenton, J.*, 709, Mar. 16, Spinning [cotton waste, &c.
Lorillard, J. (Newton), 212, Jan. 26, Steam-boilers.
Loughton, G., 2741, Oct. 16, Weighing machines.
Louis, F. (Warrington), 3315, Dec. 8, Lights for smokers.
Love, L. E. (Clark), 3488, Dec. 23, Infants' caps.
Love, W. (Lahousse), 1963, July 26, Paper-pulp.
Lowber, D. C., 2153, Aug. 15, Compressing hay, straw, &c.
Lowe, R., Pickering, J., Gardner, H., & Wood, J. & J., [276, Feb. 1, Spring mattresses, &c.
 — *R., Wood, J. & J., Pickering, J., & Gardner, H.*, [1249, May 9, Bedsteads, mattresses, &c.
 — *S., & Lamb, J. W.*, 3068, Nov. 14, Looped fabrics.
Lowman, W., 2508, Sep. 22, Obtaining and applying [motive-power.

Lowry, G., 712, Mar. 17, Hackling machines.
 Lowthian, J., 490, Feb. 24, Water-flushing apparatus.
 Lucorich, J. (Philpot), 1779, July 7, Applying force of [screw propellers].
 Lüdeke, J. E. F., 1167, May 2, Motive-power.
 Luke, R., & Jeffery, G. E., 260, Jan. 31, Engines and [boilers].
 Lukey, J., Roff, S., & Hoffman, W. B. (Haseltine), 2408, [Sep. 12, Indicating weight of cargo].
 Lull, H. (Clark), 2162, Aug. 16, Auxiliary springs.
 Lumb, L. H., 2630, Oct. 4, Baths and similar vessels.
 Lumby, E., 854, Mar. 30, Boilers for warming buildings, [&c.].
 Lungley, C., 210, Jan. 26, Dredging docks, rivers, &c.
 Lupton, B., Catlow, C., & Whitaker, J., 631, Mar. 9, [Washing clothes].
 ——— J. L., 2140, Aug. 15, Deodorizing and utilizing [sewage].
 Lürmann, F., 3006, Nov. 8, Slag bricks.
 Lyle, A., 1554, June 12, Dressing wood for cask-making, [&c.].
 Lyttle, W. A., 1535, June 10, Voltaic batteries.
 ——— W. A., 1657, June 24, Telegraphic signalling.

M.

Mabson, J., 3495, Dec. 27, Sewing-machines.
 McAdam, W., 2861, Oct. 25, Motive-power.
 McAlley, R., & Aitken, H., 1337, May 13, Alum, &c.
 Macarthur, J. R. (Jones), 415, Feb. 17, Cotton gins.
 McCalla, C. A., 2769, Oct. 18, Clip or dress fastening.
 McCarter, J. W., 2487, Sep. 21, Sewing machinery.
 MacCarthy, S. J., 2550, Sep. 27, Fasteners or connectors.
 McConnell, J. H. (Lake), 1015, Apr. 17, Preparing fibres.
 McConville, E., 364, Feb. 14, Sulphuric acid.
 McCool, J., 3169, Nov. 23, Stopping holes in ships, &c.
 ——— J., 3193, Nov. 25, Stopping holes in ships, &c.
 McCormick, C. H. (Smith), 1726, July 3, Reaping and [mowing].
 McCready, T. L., 3365, Dec. 12, Blending and forming [sheets of coloured printing inks].
 McCullen, G. D. (Clark), 3295, Dec. 6, Domestic fire- [escape].
 McCune, C. W., Smith, H. N., & Carver, B. F. (Clark), [1441, May 30, Eyelets].
 McDaniel, G. W. (Lake), 1355, May 19, Covering leather.
 Macdermott, M., & Williams, A. D., 468, Feb. 22, Boring [rock, &c.].
 McDonald, G., 347, Feb. 10, Water-tight boots.
 MacDonald, J. C., & Calverley, J., 1644, June 22, Print- [ing and cutting paper].
 Macdonell, E. R., 1228, May 6, Dinner-plates.
 MacDowall, C. J. F. S., 955, Apr. 11, Soldiers' knapsacks.
 Mace, C., & Brough, R., 643, Mar. 10, Steam-boilers.
 ——— T. K., 2836, Oct. 24, Hats.
 McElcheran, W. H., 3446, Dec. 20, Ornamenting, &c. [surfaces].
 McEvoy, C. A., 10, Jan. 3, Effecting the explosion of [torpedoes, &c.].
 ——— C. A., & Painter, W., 3527, Dec. 30, Lubri- [cating axles].
 ——— C. A., & Zimmer, L., 764, Mar. 21, Floor-cloths.
 McFarland, T. A. (Lake), 1519, June 8, Pads for trusses.
 McFarlane, A., 839, Mar. 29, Wringing machines.
 Macfarlane, D. (Van Wagner), 3243, Nov. 30, Scattering [powders on trees, &c.].
 McFarlane, J., & Barker, G., 1567, June 14, Railway rails.
 Macfarlane, J. R., 2734, Oct. 14, Charging and drawing [retorts].

MacGeorge, W., & McKay, J., 1371, May 22, Punching [and rivetting].
 McGlashan, J., 1887, July 19, Testing size & weight of [yarn].
 McGrath, D., & Crane, P. M., 2989, Nov. 6, Cooling [and freezing].
 McGregor, A., & Howcroft, T., 1582, June 15, Reaping [and mowing].
 McHardy, J., 2071, Aug. 5, Railway signals.
 Machen, S. J., 2921, Oct. 31, Boilers for heating.
 McIlvaine, C., Lloyd, W. M. C., & Firth, F. J. (Lake), [689, Mar. 15, Printers' ink].
 Mellwham, J., & Muir, M. A., 1476, June 3, Looms.
 Macintosh, J., 242, Jan. 30, Life-preservers; valves.
 ——— J., 2992, Nov. 7, Waterproof compound for [roads].
 ——— J., & Boggett, W., 1226, May 6, India-rubber [beds, &c.].
 ——— J., & Boggett, W., 3140, Nov. 21, Female attire.
 ——— J. M. (Comstock), 1637, June 22, Seed sower, [cultivator, &c.].
 Mack, W. A., & Blake, J. (Henry), 254, Jan. 31, Sew- [ing-machines].
 Mack, W. B., 29, Jan. 6, Steam-boilers.
 McKay, J., & MacGeorge, W., 1371, May 22, Punching [and rivetting].
 Mackay, W., 2564, Sep. 28, Anchors.
 MacKean, W., 45, Jan. 9, Furnaces.
 McKechnie, A., 3523, Dec. 30, Fixing boiler-tubes.
 McKellen, R. D., 1538, June 10, Winding cotton, &c.
 Macken, F. (Spineux), 2163, Aug. 16, Spinning.
 Mackenzie, H. A. O., 696, Mar. 16, Organs.
 ——— J., 3317, Dec. 8, Double-furrow ploughs.
 Mackenzie, P. W. (Newton), 2346, Sep. 5, Furnaces.
 McKenzie, W., & Cameron, C. A., 2806, Oct. 20, So- [lidified tea and coffee].
 Mackew, J., 3048, Nov. 11, Looped fabrics.
 Mackie, A., 996, Apr. 15, Perforating paper to represent [words, &c.].
 Mackinder, W., 1005, Apr. 15, Wheels for vehicles.
 ——— W., & Johnson, G., 1694, June 28, Ploughs [and cultivators].
 McKinley, A. (Croskey), 1842, July 14, Paving, roofing, &c.
 Mackintire, J., 3247, Nov. 30, Puddling furnaces, &c.
 Mackintosh, C., 668, Mar. 14, Weighing machines.
 McLachlan, A., 2087, Aug. 8, Cutting verges or edgings.
 MacLagan, R. C., Irvine, R., & Fleming, A. B., 2196, [Aug. 21, Lubricants, &c.].
 ——— R. C., Fleming, A. B., Turnbull, G. V., Sal- [vesen, C., & Irvine, R., 1451, May 31, [Lubricants for wool].
 McLaren, A., & Moffat, R. C., 2200, Aug. 22, Treating [oils; recovering sulphuric acid].
 MacLaren, J., 2744, Oct. 16, Boots and shoes.
 Macleod, J., 392, Feb. 16, Liquoring and wringing yarns.
 ——— J., 494, Feb. 24, Dyeing, washing, &c. yarns.
 MacMillan, A., 3062, Nov. 13, Securing buttons & clasps.
 McMullan, J. H., & Morgan, E. P. (Johnson), 2853, [Oct. 25, Roving frames].
 McNabb, W., 1607, June 19, Bale-hoops, &c.
 McNaught, J. & W., 542, Mar. 1, Washing & drying fibres.
 ——— W. & J., 542, Mar. 1, Washing & drying fibres.
 McNeile, A., & Slater, J., 1168, May 2, Wheels & axle- [boxes].
 MacNeill, T. T., 1704, June 30, Cigarettes; cigarette holder.
 McNicol, J., 1012, Apr. 17, Preparing fibres for paper [pulp, &c.].
 Macomber, D. O., 1315, May 16, Composition for road- [making, &c.].
 Macpherson, J., 2131, Aug. 12, Ships, vessels, &c.
 ——— W., & Elce, J., 3425, Dec. 18, Clearer for [carding engines].

Macqueen, J., & Dobson, B., 2037, Aug. 2, Spinning and doubling.
 Macredie, A., & Thomson, W., 826, Apr. 3, Casting ingots for cranked axles, &c.
 Mactear, J., 2374, Sep. 8, Utilising bye-products of soda, &c.
 Maddison, H., & Ord, J. R., 1652, June 23, Stone-breakers.
 Madge, E. (French), 176, Jan. 23, Circulating liquids.
 — H. J., 1932, July 22, Utilising spent pickle of tin plate, &c.
 — H. J., & Jenkins, J. J., 954, Apr. 11, Tin &terne plates.
 Main, T. (Lake), 340, Feb. 9, Screw propelled boats, &c.
 Maitland, W. H., 2450, Sep. 16, Coating metals.
 Mallet, R., 327, Feb. 8, Roads or paved surfaces.
 Mallock, H. A., 1792, July 8, Electric conductors.
 Mallory, W. H., Butterfield, E. L., Allen, R. N., & Kimball, L. W. (Newton), 1370, May 22, Railway wheels.
 Manceaux, F. J., 1811, July 11, Cartridges for fire-arms.
 Manier, F. A. A., 2448, Sep. 16, Pneumatic telegraphy.
 Mann, A., 2755, Oct. 17, Taps or valves.
 — J. W. & Parker, W., 1244, May 8, Reaping and mowing.
 — W., 3263, Dec. 2, Purifying gas.
 — W. T. (Stempf), 187, Jan. 25, Breech-loading ordnance.
 Manton, J. (Manton), 1389, May 23, Fire-arms.
 Manton, J. S. (Manton), 1389, May 23, Fire-arms.
 Manuel, J. & J., 1426, May 27, Blind-roller furniture.
 Manwaring, W., & Pidgeon, D., 1214, May 5, Reaping and mowing.
 March, F. H., 2452, Sep. 18, Bottles and closing same.
 Marchant, R. M., 546, Mar. 1, Steam and other engines.
 — R. M., 1490, June 5, Ice-making, &c.
 — R. M., 1949, July 25, Utilising exhaust steam, &c.
 Marchisio, G. E., 1579, June 14, Extracting olive oil.
 — G. E., & Stevens, E., 775, Mar. 22, Oils and paints.
 Marriott, E., & Duley, E., 1979, July 27, Ordnance; casting projectiles.
 Marsden, G. A., W. & W. H., & Tinker, F., 2323, Sep. 2, Trousers.
 — H., & Blamires, T. H., 705, Mar. 16, Carding engines.
 — H. M., 940, Apr. 10, Reaping and mowing.
 — H. M., 1981, July 28, Shears and axes.
 — H. R., 1769, July 6, Breaking stones, ores, &c.
 — W., W. H. & G. A., & Tinker, F., 2323, Sep. 2, Trousers.
 — W. H., W. & G. A., & Tinker, F., 2323, Sep. 2, Trousers.
 Marsh, J., 27, Jan. 5, Railway signals.
 — R., 3160, Nov. 22, Cleaning or skinning potatoes.
 Marshall, F. A., 2790, Oct. 19, Metal.
 — G., 800, Mar. 24, Walls.
 — I., 3119, Nov. 18, Extracting oil; oil cake.
 — J., 2075, Aug. 5, Thrashing and dressing machines.
 — J., & Harding, W. B., 3337, Dec. 9, Steam-engines.
 Marshall, J. B. (Newton), 1114, Apr. 27, Fire-arms.
 Marston, H. C., & Brooks, F. W. (Mills), 3265, Dec. 2, Fastening stair-rods, &c.
 Martin, C. (Bonneville), 721, Mar. 17, Carding fibres.
 Martin, E., & Kinnear, F., 1282, May 12, Medicated flannel bands.
 Martin, J. (Newton), 2425, Sep. 14, Furnaces and boilers.
 Martin, J. R., 3221, Nov. 29, Cutting & reducing wood to pulp.
 — L. C., 2774, Oct. 18, Tram-rails and roads.
 — W., 1318, May 16, Movable weirs.
 — W., 2479, Sep. 20, Lace machinery.

Martini, F. von, 1144, Apr. 28, Fire-arms.
 Martini, F. von (Priekau), 3223, Oct. 31, Fire-arms.
 Martius, C. A. (Price), 3093, Nov. 16, Drying materials.
 Martorelli, C. F. (Dence), 3384, Dec. 14, Railway carriages.
 Marx, J. (Hesse), 3318, Sep. 2, Copying letters, &c.
 Masau, B. A. (Lake), 3464, Dec. 21, Metal rods and wires.
 Mason, J., 3499, Dec. 28, Penholders.
 — S., 1722, July 3, Vacuum-kiers, pans or vessels.
 — S., & Dawson, J. W., 1948, July 23, Combining fibres.
 Masson, A., Robb, J., & Jarvis, J., 1568, June 14, Strain- ing pulp.
 Masson, J., & Hodgert, S. (Day), 950, Apr. 11, Hydraulic presses.
 Mat. F. A. le (Smith), 3218, Nov. 28, Revolvers, &c.
 — F. A. le (Smith), 3224, Nov. 29, Rifling fire-arms, &c.
 Mather, C., 702, Mar. 16, Combining gas with air.
 Mathews, C. R., 2534, Sep. 26, Gas-fittings.
 Mathieu, C. A., & Lockhead, J. (Gedge), 1910, July 21, Ploughing.
 Matthew, J., 3382, Dec. 14, Couplings.
 Matthews, G. P., 2101, Aug. 10, Brewing beer, &c.
 — H., & Bannehr, J., 556, Mar. 2, Gas and fuel.
 Matthiesen, J. P., Castenskiold, C., & Brasen, C. K. (Agerup), 736, Mar. 18, Steam vessels.
 Mauger, M. A. (Gardner), 2486, Sep. 21, Holding parcels, &c.
 — V. E. (Goodall), 1880, July 19, Cutting, &c. cards.
 — V. E. (Gardner), 2350, Sep. 6, Printing presses.
 — V. E. (Gardner), 2358, Sep. 6, Printing presses.
 — V. E. (Gardner), 2488, Sep. 21, Composing type, &c.
 — V. E. (Deffis), 2496, Sep. 22, Glass lights.
 Maw, A., 3001, Nov. 7, Working screw-presses.
 Mawson, T. W., 3308, Dec. 7, Dining and billiard tables.
 Maxfield, John & Joshua, 558, Mar. 2, Spoons and forks.
 — Joshua & John, 558, Mar. 2, Spoons and forks.
 Mayo, J. J., & Mitchell, Sir W., 1383, May 23, Signal apparatus.
 Mayor, T., & Chatterton, G. (Lake), 862, Feb. 14, Spinning flyers.
 Mayrargues, H. (Videky), 1469, June 2, Treating excreta.
 Mays, J. A., & Reynolds, W. F., 1342, May 18, Wheels, axles, &c.
 Maythorn, M. R., 601, Mar. 6, Phaetons, waggons, &c.
 Mazé-Launay, A., & Pellicieux, J. (Morris), 3400, Dec. 15, Calcining kelp.
 — A., & Pellicieux, J. (Morris), 3448, Dec. 20, Iodine & bromine.
 Mead, J., 893, Feb. 16, Nursery yacht, rocking horse, &c.
 Mee, F. J., 315, Feb. 6, Boilers for hot-water apparatus.
 Meiklejohn, J., 1402, May 24, Hanging, &c. carcasses.
 Meissner, Ackermann & Co. (Fueck), 237, Jan. 30, Vessels for oils, &c.
 Meiter, C. W., 1156, Apr. 29, Cigar tubes.
 Mellers, J., & Burton, J., 2264, Aug. 29, Clipping fabrics.
 Melling, J. W., 1681, June 27, Steam and other engines.
 Mellor, W., & Schofield, J., 3031, Nov. 9, Folding, &c. fabrics.
 Menke, T. H. (Braundbeck), 2461, Sep. 19, Sewing machines.
 Ménouval-Belcour, J. (Clark), 2679, Oct. 9, Self-acting fan.
 Menzies, W. J. (Morris), 103, Jan. 14, Envelopes.
 Menzies, W. J. (Balmuin), 783, Mar. 22, Grinding substances, mixing liquids, &c.
 Menzies, W. J. (Lewis), 1311, May 15, Manures.
 Mercader, E. de, & De Terré, A. (Wattweu), 2715, [Oct. 13, Explosives.

- Merckelbagh, L., 304, Jan. 26, Fire-arms.
 Merrick, T. (Livsey), 1778, July 7, Sewing-machine [spools].
 Merrill, G. (Tongue), 740, Mar. 18, Textile fabrics.
 — G. (Tongue), 2568, Sep. 29, Fire-arms.
 — R. S. (Johnson), 11, Jan. 3, Lamps & burners.
 — R. S. (Johnson), 1178, May 2, Lamp burners.
 Messenger, T. G., 53, Jan. 10, Coupling pipes.
 Metcalf, A., & Gibbons, W., 1687, June 28, Fall relievier [for mules].
 Metz, B., 3302, Dec. 7, Waterproof cloth.
 Meulen, J. P. V., & Morgan, R. D., 2639, Oct. 5, Railway [chairs].
 Meulen, W. H. ter (Boyd), 263, Feb. 1, Dispersing sand, [&c.; probes or searchers].
 Mewburn, J. C. (Nicolai), 2998, Nov. 7, Embroidering.
 — J. C. (Benda), 3494, Dec. 27, Dolls and other [figures].
 Meyer, B., & Haas, J. (Clark), 2890, Oct. 27, Telegraphs.
 Meynier, G. (Tongue), 3126, Nov. 18, Variegated fabrics.
 Miccio, P. A., 3042, Nov. 10, Paper-book for water- [closets, &c].
 Michael, J. J., Knight, T. W., Colls, F. W., & Atkinson, H., [1650, June 23, Paper-pulp].
 Michel, A., & Lavater, M. L. J. (Clark), 2910, Oct. 30, [Spinning rollers].
 Miette, L., & Pechenart, B., 1984, July 28, Nails.
 Mignot, F., 2236, Aug. 25, Sewing saddlery, &c.
 Milbank, I. M., 2283, Aug. 30, Fire-arms and cartridges.
 Milburn, G., 1762, July 6, Rugs and mats.
 — R., & Browning, T., 2696, Oct. 11, Treating [sewage, &c].
 Miles, A. O., & Brown, S. N. (Clark), 1026, Apr. 18, [Money-till lock & alarm].
 Miles, N., 2472, Sep. 20, Bell, gong, or alarum table.
 Millar, A., 371, Feb. 14, Hand-numbering machines, &c.
 Millard, J. J., 3151, Nov. 21, Tap for bottling liquids.
 — W., 522, Feb. 27, Jacquard looms.
 Millbourn, C., 3524, Dec. 30, Paper.
 Miller, J. & R., 735, Mar. 18, Paper-pulp.
 — J. & R., 1157, Apr. 29, Paper-pulp.
 — R. & J., 785, Mar. 18, Paper-pulp.
 — R. & J., 1157, Apr. 29, Paper-pulp.
 — B. F., 2405, Sep. 12, Omnibuses, &c.
 — W., 2060, Aug. 4, Hydro-pneumatic engines, &c.
 Mills, B. J. B. (Schwartz), 190, Jan. 25, Boots and shoes.
 — B. J. B. (Valentine), 956, Apr. 11, Preparing [meat-juices, &c].
 — B. J. B. (Hutchinson), 1044, Apr. 20, Removing [oil from matter; making beer, &c].
 — B. J. B. (Brooks), 1440, May 30, Seals for locks, &c.
 — B. J. B. (Taylor), 1686, June 27, Battery guns.
 — B. J. B. (Lewis), 1877, July 18, Hollow axles, &c.
 — B. J. B. (Lewis), 1882, July 19, Wheels, &c., and [lubricating].
 — B. J. B. (Thiers), 1883, July 19, Ventilating [vessels, &c].
 — B. J. B. (Heyl), 2835, Oct. 24, Paper boxes, &c.
 — B. J. B. (Everick), 3059, Nov. 13, Folding chairs, &c.
 — B. J. B. (Marston & Brooks), 3265, Dec. 2, Fas- [tening stair-rods, &c].
 — D., 2899, Oct. 28, Sewing boots and shoes.
 — D., & Goodyear, C., 937, Apr. 8, Sewing boots and [shoes].
 — D., Pearson, M., & Greenwood, J. O., 411, Feb. 16, [Looms].
 — D., Pearson, M., & Greenwood, J. O., 2514, Sep. 23, [Weaving].
 — J. L., 224, Jan. 28, Match-boxes, &c.
 — R., 88, Jan. 13, Pumps.
 — W. H. J., & Harman, H. W., 1112, Apr. 27, Indi- [cating time between passing trains].
 Millward, F. (Millward), 1505, June 7, Steam-boiler [indicators].
 Millward, J. (Hoeller), 699, Mar. 16, Forming bends in [pipes].
 — J. (Millward), 1505, June 7, Steam-boiler [indicators].
 Milnes, T., & Hinchcliffe, J., 3097, Nov. 16, Furnaces.
 Minasi, C., 2404, Sep. 12, Opening and closing bottles, &c.
 Mines, H. E., 1139, Apr. 28, Cooking ranges.
 — H. E., 1140, Apr. 28, Lighting and heating.
 — H. E., & Evans, P. C., 387, Feb. 15, Improving [combustion, &c].
 Minns, H. R., 438, Feb. 18, Dress fastenings, &c.
 — H. R., 1516, June 8, Iron shutters.
 Minor, P. E., & Britton, B. F. (Wright), 1208, May 4, [Waterproof compounds].
 Minton, A., 3391, Dec. 14, Water-closets.
 — A., & Warrington, T. A., 1080, Apr. 24, Clothes [brushes].
 Mirchin, E., 1952, July 25, Steam-boilers.
 Mirfield, M., & Scott, J., 2394, Sep. 11, Recovering [grease from suds, &c].
 Mitchel, W. H., 758, Mar. 21, Lubricating spindle-necks, &c.
 Mitchell, G. (Haseltine), 2299, Aug. 31, Grinding [quartz, &c].
 — H. R., & Tute, W. J. (Hunt), 2504, Sep. 22, [Quilting-machines].
 Mitchell, J., 665, Mar. 14, Looms.
 — J. & J. H., 3071, Nov. 14, Utilizing waste heat.
 — J. H. & J., 3071, Nov. 14, Utilizing waste heat.
 — W., 2145, Aug. 15, Printing felt carpets, &c.
 — Sir W., & Mayo, J. J., 1383, May 23, Signal [apparatus].
 — W. L., 30, Jan. 6, Looms.
 Moesch, C. L. H., 2608, Oct. 3, Combined bed, com- [mode, &c].
 Moffat, J., 3344, Dec. 11, Gas.
 — J., & Allan, J. F., 1555, June 12, Gas-holders.
 — J., & Snowden, S. W., 525, Feb. 27, Safety-valves.
 — R. C., & McLaren, A., 2200, Aug. 23, Treating [oils; recovering sulphuric acid].
 Moffatt, A. C., 1611, June 19, Door springs.
 — A. C., 3528, Dec. 30, Wire rope; spinning, &c. [fibres].
 — W. B., & Henley, G. M., 1827, July 12, Burning [bricks, &c].
 Moir, G., & Crane, P. M., 3055, Nov. 13, Lubricating [steam-engines, &c].
 Molard, J. J. (Newton), 2091, Aug. 8, Governors.
 Molchin, C. C. (Schnceweiss), 3529, Dec. 30, Composition [oil].
 Mold, G. & W. G., 1856, July 15, Band hoes.
 — W. G. & G., 1856, July 15, Band hoes.
 Moll, F. E. (Goll), 2672, Oct. 9, Cowls or hoods.
 Molyneux, E., 2477, Sep. 20, Pianos, organs, &c.
 Monington, J., Weston, J., & Rogers, D., 1106, Apr. 27, [Pianos].
 Monroq, J. N., & Goubet, C. D., 3506, Dec. 28, Litho- [graphic printing].
 Monteiro, J. J., 2195, Aug. 21, Treating fibres for [paper, &c].
 — J. J., 2887, Oct. 27, Textile fabrics.
 Moody, J., 1547, June 10, Keels for ships, boats, &c.
 Moore, H., 3215, Nov. 28, Tubulous steam-boilers.
 — John, 181, Jan. 24, boats.
 Moore, Joseph (Moore), 901, Apr. 5, Lubricators.
 Moore, R. (Spreckles), 575, Mar. 3, Sugar.
 — R. (Moore), 901, Apr. 5, Lubricators.
 — W. H., 2189, Aug. 19, Filters.
 Moorhouse, S., 1620, June 20, Steam-boilers.
 — S., & Kendall, W. J., 2727, Oct. 14, Railway [signalling].

Moran, T., Stausse, V., Ensinger, G. W., & Nimmo, A. [(Johnson), 2174, Aug. 18, Looms; transmitting motion.
 Morand, A., 325, Feb. 8, Brick-making.
 Moreau, E., & Isaacs, W. B. (Lake), 2055, Aug. 3, [Sewing-machines.
 Morfit, C., 987, Apr. 13, Phosphates of lime.
 — C., 997, Apr. 15, Superphosphate of lime.
 — C., 1420, May 27, Treating phosphates of lime.
 Morgan, E., 590, Mar. 4, Measuring folded fabrics.
 Morgan, E. P., & McMullan, J. H. (Johnson), 2853, [Oct. 25, Roving frames.
 Morgan, R. D., & Meulen, J. P. V., 2639, Oct. 5, Railway [chairs.
 — W., 1893, July 19, Derrick cranes.
 Morgan-Brown, W. (Goulding), 1199, May 3, Engines.
 Morley, A. E., Ellis, J. R., & Rollason, J. G., 1182, May 3, [Lockets, &c.
 Morrall, A., 2193, Aug. 21, Needles.
 Morrell, R. W., & Botterill, J., 4, Jan. 2, Crape cloth.
 Morris, A. (Pellieux & Mazé-Launay), 3400, Dec. 15, [Calceining kelp.
 — A. (Pellieux & Mazé-Launay), 3448, Dec. 20, [Iodine and bromine.
 Morris, C. N. (Cropper), 1050, Apr. 21, Printers' "rules."
 — Edmund (Menzies), 103, Jan. 14, Envelopes.
 Morris, Eli, & Bex, W., 3479, Dec. 22, Boots and shoes.
 — M., 203, Jan. 26, Looms.
 — P., & Davis, S. M., 3123, Nov. 18, Raising and [holding tinder.
 — T., & Edwards, T., 1890, July 19, Fog & danger [signal.
 — T. S., Hammond, H. & E., & Russ, E., 766, Mar. 21, [Fire-arms and cartridges.
 — W., & Eskholme, G., 249, Jan. 30, Regulating [water-supply.
 — W., 484, Feb. 23, Regulating water-supply.
 Morris, W. F., Sisco, E., & Heald, G. W. (Abel), 3189, [Nov. 24, Pumps.
 Morrison, J. B. (Haseltine), 578, Mar. 3, Flexible shaft- [ing, &c.
 Morrison, J. D., 1955, July 25, Purifying water, &c.
 Morse, G. F. (Clark), 2934, Nov. 1, Ornamenting glass [surfaces, &c.
 Mortlock, T., & Newton, J., 687, Mar. 15, Wood and iron [fencing.
 Morton, A. G. E., & Coleman, H. S., 1630, June 21, [Cultivating land; traction engines.
 Moscrop, W., 493, Feb. 24, Spinning and doubling.
 Moseley, C., 2927, Nov. 1, Bowls for calendars, &c.
 — J., 862, Mar. 31, Wheels for carriages, &c.
 Motay, C. M. T. du (Smith), 470, Feb. 22, Chlorine.
 — C. M. T. du (Smith), 491, Feb. 24, Ammonia.
 — C. M. T. du (Smith), 1725, July 3, Recovering [potash, &c.
 — C. M. T. du (Smith), 2231, Aug. 25, Ammonia.
 — C. M. T. du (Smith), 2232, Aug. 25, Chlorine [and hypochlorites.
 Mott, J. L., & Demarest, J. (Clark), 1105, Apr. 26, [Moulds and cores.
 Mottram, J. R. (Clive), 287, Feb. 2, Cutting glass.
 Moubray, R., 1651, June 23, Treating maize to obtain [spirit.
 Moulton, J. H., Sawyer, C. E., & Perkins, E. L. (Ha- [seltine), 528, Feb. 27, Steam-traps.
 Moussard, X. (Clark), 3416, Dec. 16, Generating and [purifying gases.
 Moxon, W., & Hodgson, G., 1251, May 9, Weaving car- [pets, &c.
 Moy, T., & Shill, R. E., 2762, Oct. 18, Steam-engines.
 — T., & Shill, R. E., 3238, Nov. 30, Aerial-navigation.
 Mührad, H. (Budenberg), 454, Feb. 22, Injectors; rais- [ing and forcing liquids.

Muir, M. A., & McIlwham, J., 1476, June 3, Looms.
 Muirhead, J., & Clark, J. L., 2418, Sep. 14, Telegraph [instruments.
 Mulholland, F. G., 2772, Oct. 18, Roadways, floorings, &c.
 Muller, A. (Smith), 2676, Oct. 9, Treating fabrics, &c. [for dyeing.
 — C. E. E. (Johnson), 3289, Dec. 6, Kilns or ovens.
 Mullin, J., 1615, June 20, Mules for spinning.
 Mulot, A., & Leblond, P. H. (Clark), 3277, Dec. 5, Steam- [engines.
 Mundy, E., 2876, Oct. 26, Water-heating economisers.
 Munro, A., & Adamson, W. B., 2034, Aug. 2, Cutting [stone, &c.
 — D., 822, Mar. 27, Furnaces and boilers.
 Munson, R. C. (Clark), 1525, June 8, Lubricator for [pulleys.
 — R. C. (Clark), 1760, July 6, Lubricating appa- [ratus.
 — R. C. (Clark), 1943, July 24, Opening envelopes, [cutting thread, &c.
 Muntz, G. F., 1143, Apr. 28, Propelling vessels.
 — G. F., 2246, Aug. 26, Gaffs for ships.
 Muratori, C., 2521, Sep. 23, Substitute for wood.
 Muratori, C. (Galland), 3227, Nov. 29, Leather-cloth.
 Murcott, T., 1003, Apr. 15, Fire-arms.
 Murdoch, H. H. (Roettger), 992, Apr. 14, Refrigerating.
 — H. H. (Roettger), 2701, Oct. 11, Refrigerating.
 — J., 2445, Sep. 16, Washing, mixing & churning.
 Mure, J. M., 3408, Dec. 16, Sights for fire-arms.
 Murphy, T., 646, Mar. 10, Rotary engines and pumps.
 Murray, A., & Cowburn, J., 686, Mar. 15, Looms.
 — C. H., 336, Feb. 9, Ornamental or moulded bricks.
 — G. W., & Garrard, G. M., 2739, Oct. 16, Tilling [land.
 — J., 1153, Apr. 29, Ploughs.
 — J., & Ferrie, R., 2893, Oct. 28, Dyeing.
 — K., 2177, Aug. 18, Fences.
 Muschamp, J. B., 1326, May 16, Explosive substances.
 — J. B., 2512, Sep. 23, Liquid-meters.
 Musgrave, S. H., 1429, May 29, Delivering fluids from [tubes, &c.
 Mussinan, O. (Clark), 747, Mar. 20, Nail-cutting machine.
 Myers, A. G. (Lake), 1509, June 7, Pneumatic telegraphs.
 — F. (Newton), 908, Apr. 5, Sad and fluting iron.

N.

Napier, J. M., 467, Feb. 22, Weighing machines.
 — J. M., 1705, June 30, Weighing machines.
 — J. R., 2775, Oct. 18, Speed indicators.
 Nash, A., 1419, May 27, Fastening ties, &c.
 Nasmith, J., 48, Jan. 9, Combing machines.
 National Toy Co. (Newton), 2942, Nov. 2, Automatic doll.
 Navarro, J. F. de (Newton), 184, Jan. 24, Liquid-meters.
 — J. F. de (Newton), 869, Mar. 31, Fluid-meters.
 — J. F. de (Newton), 1227, May 6, Liquid-meters.
 Naylor, C., 2443, Sep. 16, Commodes or closets.
 — W., 1245, May 9, Railway breaks.
 — W., 3088, Nov. 15, Retarding & stopping trains.
 Neale, E. V., 2058, Aug. 4, Opening and closing windows [and doors.
 — E. V., 2618, Oct. 4, Fittings for doors, windows, &c.
 — E. V., 2950, Nov. 3, Governing and arresting mo- [tion, &c.
 Negri, C. de, 2019, Aug. 1, Paper-pulp.
 — C. de, & Craddock, E., 557, Mar. 2, Expressing [oils, &c.
 Neilson, J., 2483, Sep. 21, Enamelling metal articles.

Nelson, W. D. E., & Balch, A. H. (Haseltine), 477, [Feb. 23, Separating magnetic iron.
 Nes, C. M. (Johnson), 866, Mar. 31, Iron and steel.
 Neuhaus, M. (Beuther), 806, Mar. 24, Axle-boxes.
 Nevill, R., 273, Feb. 1, Retorts, annealing pots, &c.
 Newall, R. S., 599, Mar. 6, Breaking stones, &c.
 — R. S., 611, Mar. 7, Ropes.
 Newby, J., 2133, Aug. 14, Boots and shoes.
 Newell, W., 2523, Sep. 23, Handles for tea-pots, &c.
 Newell, W. H. (Newton), 2287, Aug. 30, Billiard markers.
 Newlands, B. E. R., 1416, May 26, Alum.
 — B. E. R., 1700, June 29, Manures.
 — B. E. R. & J. A. R., & Duncan, J., 2090, [Aug. 8, Sugar.
 — J. A. R. & B. E. R., & Duncan, J., 2090, [Aug. 8, Sugar.
 Newton, A. V. (Howe), 6, Jan. 2, Sewing-machines.
 — A. V. (Taylor), 25, Jan. 5, Transmitting motive [power.
 — A. V. (Lorillard), 212, Jan. 26, Steam-boilers.
 — A. V. (Hessin), 289, Feb. 2, Lozenges.
 — A. V. (Brown), 357, Feb. 11, Wind-mills.
 — A. V. (Schettler), 610, Mar. 7, Arresting trains.
 — A. V. (Henderson), 688, Mar. 15, Refining, &c. [cast iron.
 — A. V. (Seibert), 796, Mar. 23, Lubricators.
 — A. V. (De Navarro), 869, Mar. 31, Fluid-meters.
 — A. V. (Myers), 908, Apr. 5, Sad & fluting iron.
 — A. V. (Hunter), 971, Apr. 12, Propelling apparatus.
 — A. V. (Lenoir), 974, Apr. 12, Telegraphing.
 — A. V. (Wildman), 1002, Apr. 15, Stringed instruments.
 — A. V. (Knight), 1103, Apr. 26, Electrotypes moulds.
 — A. V. (Thompson), 1104, Apr. 26, Pliers, &c.
 — A. V. (Aronson), 1131, Apr. 28, Street lamps, &c.
 — A. V. (De Navarro), 1227, May 6, Liquid-meters.
 — A. V. (Slawson), 1263, May 10, Fare receptacle.
 — A. V. (Crane), 1354, May 19, Railway couplings.
 — A. V. (Thompson), 1362, May 20, Hollow [ware, &c.
 — A. V. (Allen, Kimball, Mallory & Butterfield), [1370, May 22, Railway wheels.
 — A. V. (Keegan), 1422, May 27, Paper-making.
 — A. V. (Baxter), 1462, June 1, Cutting, dressing, [&c. stone.
 — A. V. (Alsip), 2026, Aug. 1, Handles of [shovels, &c.
 — A. V. (Cade), 2079, Aug. 7, Belt fastenings.
 — A. V. (Molard), 2091, Aug. 8, Governors.
 — A. V. (Brown), 2107, Aug. 10, Wind-mills.
 — A. V. (Good), 2211, Aug. 22, Forming fibre [slivers.
 — A. V. (Pike), 2356, Sep. 6, Saving fuel in [furnaces.
 — A. V. (Godfrey), 2393, Sep. 11, Preventing [oxidation.
 — A. V. (Rogers, Wilkins & Harvey), 2501, Sep. 22, [Brushes.
 — A. V. (Grimaldi), 2579, Sep. 29, Thrashing, &c.
 — A. V. (Van Rensselaer), 2598, Oct. 2, Sad-irons.
 — A. V. (Bastet & Seligman), 2759, Oct. 17, [Electric batteries.
 — A. V. (Bosson), 2831, Oct. 23, Ribbon slivers.
 — A. V. (Thompson), 2880, Oct. 26, Breech-loading [ordnance.
 — A. V. (Counord), 2895, Oct. 28, Sawing machinery.
 — A. V. (Wagstaff), 2937, Nov. 1, Raising water.
 — A. V. (National Toy Co.), 2942, Nov. 2, Automatic doll.
 — A. V. (Lewis), 2943, Nov. 2, Twine-cutters.

Newton, A. V. (Powers), 2988, Nov. 6, Treating cotton- [seed.
 — A. V. (Tessier, Tessier & Tessier), 3115, [Nov. 17, Manure.
 — A. V. (Otis & Otis), 3135, Nov. 20, Hoists.
 — A. V. (Denamore), 3177, Nov. 23, Type-printing.
 — A. V. (Cornut), 3321, Dec. 8, Spinning.
 — A. V. (Otis & Otis), 3430, Dec. 18, Hoisting [apparatus.
 — A. V. (Radinger), 3462, Dec. 21, Engine valve [gear.
 — H. E. (Phelps), 1756, July 5, Railway wheels.
 — H. E. (Palmer), 1889, July 19, Lounge chairs.
 — H. E. (Grave), 8280, Dec. 5, Preventing stop- [pages in gas pipes.
 — J., & Mortlock, T., 687, Mar. 15, Wood and [iron fencing.
 — W. E. (Holdredge, Harrington & Harrington), [177, Jan. 23, Cheese.
 — W. E. (De Navarro), 184, Jan. 24, Liquid-meters.
 — W. E. (George), 428, Feb. 17, Pen-holders.
 — W. E. (Grimes), 429, Feb. 17, Lamps.
 — W. E. (Gates), 749, Mar. 20, Fastening, &c. [window-sashes.
 — W. E. (Jenty), 750, Mar. 20, Roadways, pave- [ments, &c.
 — W. E. (Draper), 794, Mar. 23, Fibre for paper, &c.
 — W. E. (Collom), 833, Mar. 28, Washing ores, &c.
 — W. E. (Gloag), 856, Mar. 30, Treating syrup [and sugar.
 — W. E. (Davison), 857, Mar. 30, Coal gas.
 — W. E. (Assmann), 867, Mar. 31, Washing [machines.
 — W. E. (Spencer), 907, Apr. 5, Pyrometers; [furnace linings.
 — W. E. (Graham), 925, Apr. 8, Asphalt roads, &c.
 — W. E. (Thompson), 1018, Apr. 17, Holding, &c. [window-blinds.
 — W. E. (Thompson), 1019, Apr. 17, Sash fasteners [and locks.
 — W. E. (Nolet), 1034, Apr. 19, Regulating supply [of steam to engines.
 — W. E. (Graham), 1035, Apr. 19, Mastics, [cements, &c.; applying same.
 — W. E. (Marshall), 1114, Apr. 27, Fire-arms.
 — W. E. (Ryerson), 1195, May 3, Pulverising [ores, &c.
 — W. E. (Allen & Allen), 1252, May 9, Weighing.
 — W. E. (Elmer), 1339, May 18, Gas.
 — W. E. (Strange), 1353, May 19, Hulls of vessels.
 — W. E. (Paine & Frost), 1361, May 20, Electro- [magnetic engines.
 — W. E., & Payne, J. B., 1656, June 23, Twines, [lines, cords, &c.
 — W. E. (Brennan), 1743, July 4, Roads, pave- [ments, &c.
 — W. E. (Cody), 1770, July 6, Breech-loading [ordnance.
 — W. E. (Hoe), 1825, July 12, Letter-press printing.
 — W. E. (Wright), 1850, July 14, Condensers.
 — W. E. (Fitts), 2146, Aug. 15, Preparing grain [for food.
 — W. E. (Hayes), 2210, Aug. 22, Skylights, &c.
 — W. E. (Hayem), 2271, Aug. 29, Reducing rags, &c.
 — W. E. (Newell), 2287, Aug. 30, Billiard markers.
 — W. E. (Babbitt), 2345, Sep. 5, Propelling vessels.
 — W. E. (Mackenzie), 2346, Sep. 5, Furnaces.
 — W. E. (Martin), 2425, Sep. 14, Furnaces & boilers.
 — W. E. (Jouet-Pastre), 3187, Nov. 24, Steam- [generators.
 — W. E. (Hauzeur), 3228, Nov. 29, Heating [furnaces.

Newton, W. E. (*de Forville*), 3281, Dec. 5, Bicycles or [velocipedes].
 — W. E. (*Elmer*), 3379, Dec. 13, Generating gases.
 — W. E. (*Wurtz*), 3503, Dec. 28, Gas.
 Ney, J. J., 3033, Nov. 10, Preventing slipping on roads, &c.
 — J. J., 3131, Nov. 20, Scattering sand, &c. on roads.
 Nicholas, R., 233, Jan. 28, Cases for gun actions.
 Nicholls, H. M., 75, Jan. 12, Printing machines.
 — R., 2132, Aug. 14, Fringes, ribbons & trimmings.
 — R., 2159, Aug. 16, Trimmings.
 — S., 1447, May 31, Watering cart, &c.
 Nichols, W., & Batley, W. S., 967, Apr. 12, Feeding [clay in making bricks, &c.
 Nicholson, E. C., & Price, A. P., 2430, Sep. 15, Safety [gun cotton].
 Nickoll, J. J., & Read, G., 3268, Dec. 4, Signalling.
 Nickols, D., 1266, May 11, Taps, cocks or valves.
 Nicolai, M. (*Mewburn*), 2998, Nov. 7, Embroidering.
 Nightingale, C., 3257, Dec. 1, Mouth-piece or protector.
 Nilus, E., 666, Mar. 14, Ordnance.
 Nilson, O. (*Lake*), 826, Mar. 28, Feeding paper in printing.
 Nimmo, A., *Moran, T., Stausse, V., & Ensinger, G. W.* [Johnson], 2174, Aug. 18, Looms; transmitting motion.
 Nissen, H. N., 2449, Sep. 16, Printing to prevent fraud.
 Nixon, J., & Winterbottom, J., 970, Apr. 12, Knife tangs, &c.
 Noble, F. J., & Grout, W. H. J., 1468, June 2, Bicycles [and velocipedes].
 Nodder, R. J., 65, Jan. 10, Fire-arms.
 Nolet, C. (*Newton*), 1034, Apr. 19, Regulating supply [of steam to engines].
 Norfolk, R., 1046, Apr. 21, Stove for drying, &c. timber.
 Norman, J., 67, Jan. 11, Tubes.
 — J., 2173, Aug. 18, Abstracting heat.
 — J. (*Hutchinson*), 913, Apr. 6, Sugar-cane mills.
 — S. W., 218, Jan. 27, Steering tramway cars.
 — T., 3029, Nov. 9, Marbles.
 Normandy, A. L., 1042, Apr. 20, Producing cold & ice.
 Normann, J. de (*Downing*), 3117, Nov. 17, Screw-pro- [pellers].
 Norminton, W. R., 1905, July 20, Piano-forte escapements.
 Norris, B. A. (*Barnaby*), 1526, June 9, Casket for ex- [hibiting cards, &c.
 — C., & Seed, J., 1093, Apr. 25, Spinning mules.
 Norton, F., & Davies, J. S., 36, Jan. 7, Steam-boilers.
 — J. L., 1938, July 22, Flooring for stalls of stables.
 — J. L., 2571, Sep. 29, Drying; bread and biscuit [baking].
 — J. L., 2627, Oct. 4, Stair treads, paving, &c.
 — J. L., 3198, Nov. 25, Stables, sheds & slaughter- [houses].
 — J. L., & Hawksley, G., 132, Jan. 18, Mills.
 Nunes, B. (*Nunes*), 2931, Nov. 1, Exhibiting pictures, &c.
 Nunes, Hon. R. (*Nunes*), 2931, Nov. 1, Exhibiting pic- [tures, &c.
 Nunn, W., 912, Apr. 6, Covered carriages.
 — W., 2638, Oct. 5, Two-wheeled carriages.
 Nurse, G., 865, Mar. 31, Coating metal plates with tin, &c.
 Nussey, A., & Pilling, A., 1037, Apr. 20, Sewing-machines.
 — A., Pilling, A., & Hall, C. H., 1720, July 3, [Sewing-machines].
 — A., Pilling, A., & Hall, C. H., 3172, Nov. 23, [Sewing-machines].
 — G. H., & Leachman, W. B., 3230, Nov. 29, Press- [ing, &c. fabrics].
 Nutt, J. H., & Selby, G. E., 71, Jan. 11, Horse hair wrappers.
 Nuttall, J., 215, Jan. 27, Looms.
 Nutter, E., 2995, Nov. 7, Looms.

O.

Oates, W. H., & Jones, R., 3381, Dec. 14, Carding-engines.
 Oatley, E., 2175, Aug. 18, Pressing cheese, &c.
 O'Brien, E., 1816, July 12, Turning over leaves of music.
 O'Connell, E., *Guerriero, A., & Cadoux, L.* (*Bonne- ville*), 2096, Aug. 9, Paving.
 O'Connor, P., 2241, Aug. 26, Hinges.
 O'Dell, A. (*Whight*), 2190, Aug. 19, Hand-clamps.
 Oggioni, A., 3330, Dec. 9, Ships' signal-lamps.
 Ogilvie, R., 1300, May 13, Stuffing-boxes.
 Ojeda, E. (*Billinghurst*), 2365, Sep. 7, Harrows.
 Okes, J. C. R., 2980, Nov. 6, Working engines & pumps.
 Oldroyd, A., 47, Jan. 9, Tobacco pouches.
 — J. & M., 3294, Dec. 6, Carpets.
 — J. & M., & Woodcock, J., 299, Feb. 3, Dyeing [fabrics].
 — J. & M., & Woodcock, J., 1229, May 6, Dyeing [fabrics, &c.
 — M. & J., 3294, Dec. 6, Carpets.
 — M. & J., & Woodcock, J., 299, Feb. 3, Dyeing [fabrics].
 — M. & J., & Woodcock, J., 1229, May 6, Dyeing [fabrics, &c.
 Oliver, G., 1234, May 6, Gymnastics.
 — H., 1394, May 24, Polishing granite, &c.
 Oliver, J. S., & Harris, E. (*Harris*), 1048, Apr. 21, Dis- [tilling whiskey, &c.
 Oliver, T., 1415, May 26, Corn mills.
 Olivier, —, & *Perret Bros.* (*Spence*), 1807, July 11, [Roasting pyrites, &c.
 Olpherts, R., 1369, May 22, Indigo presses.
 — R., 1539, June 10, Pressing indigo, &c.
 — R., 1586, June 15, Cotton-presses.
 Olrick, L., & Field, E., 1043, Apr. 20, Safety-valves.
 Olver, J. S., 714, Mar. 17, Urinals and lavatories.
 Ommanney, F. F., & Routledge, H., 361, Feb. 13, Ex- [pansion valves].
 Onion, W., 2839, Oct. 24, Looped or knitted fabrics.
 Onions, J., 859, Mar. 31, Basting jack.
 Oram, S., 1183, May 3, Boilers and generators.
 Ord, J. R., & Maddison, H., 1652, June 23, Stone-breakers.
 Ormerod, J., 333, Feb. 9, Looms.
 Orth, W. H., 230, Jan. 28, Sweeping machines.
 Osborn, S., 2994, Nov. 7, Grinding and polishing reaper [knives].
 Osborne, D. M. (*Lake*), 7, Jan. 2, Harvesting machines.
 Osborne, T., & Cotton, J., 1494, June 5, Railway breaks.
 Osbourn, F., 268, Feb. 1, Waistcoats.
 — F., 767, Mar. 21, Cutting cloth, &c.
 Osmond, J., 2856, Oct. 25, Anchors for steam cultivators.
 Osselin, A. F., 728, Mar. 18, Motive-power.
 Otis, C. R. & N. P. (*Newton*), 3135, Nov. 20, Hoists.
 — C. R. & N. P. (*Newton*), 3430, Dec. 18, Hoists.
 — N. P. & C. R. (*Newton*), 3135, Nov. 20, Hoists.
 — N. P. & C. R. (*Newton*), 3430, Dec. 18, Hoists.
 Ott, A., 890, Apr. 4, Utilizing tin clippings or tanners' [waste].
 Oudit, S. D., & Deschamps, L. O. (*Smith*), 2015, July 31, [Cutting threads of nets, &c.
 Owen, J., 2470, Sep. 20, High pressure filters.
 Oxley, J., 1748, July 5, Cask washing machines.

P.

Page, J., 1603, June 17, Tramways and railways.
 — W., 1122, Apr. 27, Riddles or sieves.
 Paget, F. A., 510, Feb. 25, Annealing furnaces.

- Paget, F. A., & Asher, J. W., 511, Feb. 25, Ice-making.
 — F. A., & Asher, J. W., 2228, Aug. 25, Abstracting heat.
 — F. A., & Lemoine, L., 1257, May 10, Springs.
 Paine, H. M., & Frost, M. S. (Newton), 1361, May 20, [Electro-magnetic engines.
 Painter, W., & McEvoy, C. A., 3527, Dec. 30, Lubricating [axles.
 Palliser, W., 1433, May 29, Boots.
 Palmer, G. (Curtis), 1410, May 25, Picking waste.
 Palmer, J., 3017, Nov. 8, Hursts and bites for hammers.
 — W., 969, Apr. 12, Dressing flour.
 Palmer, W. (Newton), 1889, July 19, Lounge chairs.
 Papier, J. B. C. A., 2941, Nov. 2, Preventing smoky [chimneys, &c.
 Parish, H. H. (Baly), 351, Feb. 10, Manure.
 Parker, A. J., & Esson, J., 430, Feb. 17, Printing presses.
 — E. L., 2970, Nov. 4, Brace buckles.
 — F., & Haywood, G. H., 216, Jan. 27, Stove-grates.
 — J. W., 407, Feb. 16, Boring and drilling.
 — T. W., & Greenwood, J., 1062, Apr. 22, Spinning.
 — T. W., & Greenwood, J., 1679, June 27, Spinning.
 — W., & Mann, J. W., 1244, May 8, Reaping and [mowing.
 Parkes, A., 2517, Sep. 23, Iron.
 Parkin, I., & Lewis, J., 2885, Oct. 27, Studs for horse- [shoes.
 — P. W., 1677, June 27, Harness stops for shafts [of carriages.
 Parkins, J., 1888, July 19, Regulating borders on cards, &c.
 Parkinson, C., 1573, June 14, Beaming or warping ma- [chines.
 — C., & Lord, R. H., 613, Mar. 8, Carding- [engines.
 — W., & Dickinson, W., 1414, May 26, Beam- [ing and sizing yarn.
 Parkyns, Sir T. G. A., 860, Mar. 31, Bridges, viaducts, [girders, &c.
 Parlour, J. T., 1016, Apr. 17, Framework for hop-bine &c.
 — J. T., 2664, Oct. 9, Raising sunken ships, &c.
 Parnacott, E. J. W., 2057, Aug. 4, Floor-cloth, &c.
 — E. J. W., 2070, Aug. 5, Elastic waterproof [sheets.
 Parnell, E. W., 2874 Oct. 26, Phosphatic fertilizers.
 — W., 102, Jan. 14, Window-blinds.
 Parrish, D. (Parrish), 1610, June 19, Towelling, table- [cloths, napkins, &c.
 Parrish, E. (Parrish), 1610, June 19, Towelling, table- [cloths, napkins, &c.
 Parry, F., 2233, Aug. 25, Drying precipitated sewage, &c.
 — F., 2481, Sep. 21, Drying sewage, &c.
 Parry, G. T. (Kemp), 3075, Nov. 15, Oil lamps.
 Parsell, D., 3207, Nov. 27, Steam-engines and boilers.
 Partz, A. F. W. (Gedge), 849, Mar. 30, Moulding, &c. [sugar.
 Paschkoff, N. M., & Jorderj, C. A. (Johnson), 3043, [Nov. 10, Solidifying oils, &c.
 Pashley, J., & Buttery, W., 451, Feb. 21, Fire-arms.
 Pasteur, L., 2225, Aug. 24, Brewing.
 Pastre, A. M. Jout- (Newton), 3187, Nov. 24, Steam- [generators.
 Paterson, H., 42, Jan. 7, Cutting out, &c. labels for [bobbins.
 — James, 724, Mar. 17, Capsuling bottles, &c.
 — James, 3213, Nov. 28, Capsuling bottles, &c.
 — James (Drummond), 2202, Aug. 22, Sugar.
 — John, 1071, Apr. 22, Treating paper-pulp.
 — W. W., & Liebieh, L., 1633, June 21, Pianofortes.
 Patterson, J., 527, Feb. 27, Beetling machines.
 — R. & S., 2354, Sep. 6, Mill-stones.
 — S. & R., 2354, Sep. 6, Mill-stones.
 Patton, R., & Piper, W., 1336, May 18, Pulp for paper, &c.
 Paul, A. & M., 585, Mar. 4, Ships' windlasses.
 Paul, B. H., 1985, July 28, Asphalte paving.
 — M. & A., 585, Mar. 4, Ships' windlasses.
 — W., & Haley, T., S., S. & J., 1217, May 5, Finish- [ing leather.
 Pavel, W. (Gedge), 2490, Sep. 21, Applications of sponge.
 Pavy, E., 1325, May 16, Transporting passengers, goods, &c.
 Pawson, W., 2462, Sep. 19, Taps or valves.
 — W., 3460, Dec. 21, Water-closets.
 Payne, D., 561, Mar. 2, Printing.
 — J. B., 19 Jan. 4, Twines, lines, cords, &c.
 — J. B., & Newton, W. E., 1656, June 23, Twines, [lines, cords, &c.
 — S. J., 3273, Dec. 5, Fire-bricks, crucibles, &c.
 Peacock, J., 1661, June 24, Printing fabrics.
 Pearce, C., & Hancock, D., 2025, Aug. 1, Gas.
 Pearson, James, & Rumney, R., 2400, Sep. 12, Mules for [spinning.
 — John, & Allanson, W., 2078, Aug. 7, Chain [fastenings, &c.
 — Joseph, 1583, June 15, Dressing, dyeing, scour- [ing, &c. goods.
 — Joseph, 1590, June 15, Dressing, dyeing, scour- [ing, &c. goods.
 — M., Greenwood, J. O., & Mills, D., 411, Feb. 16, [Looms.
 — M., Greenwood, J. O., & Mills, D., 2514, Sep. 23, [Weaving.
 — T. C., 2112, Aug. 10, Self-cleansing filters.
 — T. C., 2113, Aug. 10, Self-acting cask tilt.
 — T. C., 2115, Aug. 10, Lubricators.
 — T. C. (Seward), 2111, Aug. 10, Seed-planters.
 — W., & Bradbury, H., 881, Apr. 3, Looms.
 Pease, C. A. (Lake), 3102, Nov. 16, Underlinings for [carpets.
 Pécaud, A., 2546, Sep. 27, Railway carriage brakes.
 Pechenart, B., & Miette, L., 1984, July 28, Nails.
 Peck, J. F. (Hughes), 1732, July 4, Spring bed bottoms.
 Pedley, D. & M., 2460, Sep. 19, Looms.
 — M. & D., 2460, Sep. 19, Looms.
 Peebles, D. B., 2446, Sep. 16, Gas regulators.
 Pellieux, J., & Mazè-Launay, A. (Morris), 3400, Dec. 15, [Calcining kelp.
 — J., & Mazè-Launay, A. (Morris), 3448, Dec. 20, [Iodine and bromine.
 Pender, J., & Rae, M., 3398, Dec. 15, Artificial asphalte.
 Pendlebury, R., Ainsworth, E., & Wright, W. C., 3034, [Nov. 10, Bleaching.
 Pendred, V., 194, Jan. 25, Carriage Wheels.
 — V., 679, Mar. 14, Vertical boilers.
 Penn-Gaskell, P., 565, Mar. 2, Cutting drains or trenches.
 Penton, G., 3058, Nov. 13, Fire-arms.
 Perkins, E. L., Moulton, J. H., & Sawyer, C. E. [(Haseltine), 528, Feb. 27, Steam-traps.
 Perkins, G. C., 1006, Apr. 15, Woven wire spring [mattresses.
 Perkins, J. (Lake), 1323, May 16, Steam-boilers.
 — J. A., Hyatt, I. S. & J. W. (Lake), 1025, [Apr. 18, Plate for artificial teeth.
 Perkins, L., 1379, May 23, Wheels for traction en- [gines, &c.
 — L., 1822, July 12, Steam-engines.
 — L., 2818, Oct. 21, Locomotive & traction engines.
 — L., 2819, Oct. 21, Marine & stationary engines.
 Perowne, B., 3255, Dec. 1, Cutting turnips, &c.
 Perreux, L. G. (Johnson), 2208, Aug. 22, Velocipedes.
 Perret, Bros., & Olivier (Spence), 1807, July 11, Roast- [ing pyrites, &c.
 Perry, J. J., 3144, Nov. 21, Metallic boxes for pens, [pins, &c.
 — J. J. (Verster), 1685, June 27, Letters, figures, &c.
 — T. J., 3066, Nov. 14, Rolling iron and steel.
 Peters, A. (Lake), 933, Apr. 8, Furnaces and flues.

- Peters, A. (Lake)*, 1007, Apr. 15, Raising, forcing, and [exhausting air, gas, &c.]
- Peters, J. & S.*, 3458, Dec. 21, Supplying water to closets.
- *S. & J.*, 3458, Dec. 21, Supplying water to closets.
- Petersen, J.*, 3324, Dec. 8, Protecting submarine cables, &c.
- Petit, A. O. (Gedge)*, 3173, Nov. 23, Elastic velvets.
- Petipierre, H. (Clark)*, 2616, Oct. 3, Steam-generators.
- Petrie, James*, 2813, Oct. 21, Steam-engine valves.
- *John*, 2627, Aug. 1, Treating fibres.
- Peverett, W.*, 1200, May 3, Grain and seed separator.
- Peyron, Germain & Benoit (Gedge)*, 1909, July 21, [Knitting.]
- Peyrouse, L. L. A. E. P. de la*, 2260, Aug. 28, Treating [fatty matters.]
- Phalp, O.*, 301, Feb. 3, Preserving metals.
- Phelps, S. F. (Newton)*, 1756, July 5, Railway wheels.
- Philip, G.*, 917, Apr. 6, Desks, music stands and seats.
- Phillips, J.*, 2206, Aug. 22, Box-irons.
- *J. E., & Hornsby, R.*, 982, Apr. 13, Ploughs.
- *J. E., & Hornsby, R.*, 1798, July 8, Reaping [and mowing.]
- *P. S., & Hacking, T.*, 823, Mar. 28, Steam- [generators.]
- *S., & Frankenstein, P.*, 1613, June 20, Fasten- [ings of leggings, &c.]
- Philpot, H. (Lucovich)*, 1779, July 7, Applying force of [screw propellers.]
- Pickering, James, Gardner, H., Lowe, R., & Wood, J.* & *J.*, 276, Feb. 1, Spring mattresses, &c.
- *James, Gardner, H., Lowe, R., & Wood, J.* [& *J.*, 1249, May 9, Bedsteads, mattresses, &c.]
- *John*, 2584, Sep. 30, Dip candles.
- *John*, 2796, Oct. 19, Candle-wicks.
- Pidding, W.*, 2053, Aug. 3, Locomotion; propelling [vehicles, &c.]
- *W.*, 2873, Oct. 26, Attaching rails to vehicles.
- Pidgeon, D., & Manwaring, W.*, 1214, May 5, Reaping [and mowing.]
- Pierce, W.*, 1125, Apr. 28, Railway breaks.
- Pike, C. F. (Newton)*, 2356, Sep. 6, Saving fuel in [furnaces.]
- Pilbeam, A.*, 2127, Aug. 11, Knitting & sewing machines.
- Pilgrim, E., & Eli, A.*, 1588, June 15, Stopping bottles, [&c.; drawing off liquids.]
- Pilkington, W.*, 421, Feb. 17, Traction-engines.
- *W. W.*, 207, Jan. 26, Glass.
- Pilling, A., & Nussey, A.*, 1037, Apr. 20, Sewing machines.
- *A., Hall, C. H., & Nussey, A.*, 1720, July 3, Sewing [machines.]
- *A., Hall, C. H., & Nussey, A.*, 3172, Nov. 23, [Sewing machines.]
- Pilon, Emile, E. & J. (Johnson)*, 2803, Oct. 20, Disin- [tegrators.]
- *Eugene, E. & J. (Johnson)*, 2803, Oct. 20, Dis- [integrators.]
- *J., E. & E. (Johnson)*, 2803, Oct. 20, Disin- [tegrators.]
- Pinchbeck, J.*, 787, Mar. 23, Wheels for road locomotives.
- Pinder, J.*, 2519, Sep. 23, Securing windows, doors, &c.
- *M.*, 1695, June 29, Pipe joints.
- *M., & Westo, W. H.*, 2428, Sep. 15, Waste pipes [for cisterns.]
- Pinet, D. H. (Smith)*, 2054, Aug. 3, Motive-power.
- Pink, R. (Ireland & Ireland)*, 2548, Sep. 27, Cast or [Bessemer steel ingots.]
- Pinker, J., & Hoeking, F.*, 3372, Dec. 13, Slide-valves.
- Pinkney, R.*, 2745, Oct. 16, Aniline colors for dyeing, &c.
- Pinkus, H.*, 3359, Dec. 12, Constructing, and using [railways, &c.]
- Pinn, C.*, 2469, Sep. 19, Preventing waste of water.
- Piper, W., & Patton, R.*, 1336, May 18, Pulp for paper, &c.
- Pironet, J. F.*, 369, Feb. 14, Separating pulp from fibres.
- Pittman, G. W.*, 2634, Oct. 5, Heckling & drawing fibres.
- Plasse, V. (Clark)*, 2879, Oct. 26, Taffo-guano.
- Platt, J.*, 2427, Sep. 15, Stills for treating beet roots, &c.
- Plessner, J. M.*, 2587, Sep. 30, Motive-power.
- Plimsoll, H. D.*, 1448, May 31, Safety lamps.
- *H. D.*, 3057, Nov. 13, Safety lamps.
- Pocock, A. W.*, 87, Jan. 12, Mortice locks and catches.
- *A. W.*, 426, Feb. 17, Liquid-meters.
- *L.*, 2628, Oct. 4, Drying guano, manure, &c.
- Podmore, J. & R.*, 1458, June 1, Cork soled boots & shoes.
- *R. & J.*, 1458, June 1, Cork soled boots & shoes.
- Pollack, H. (Pörtner)*, 2932, Nov. 1, Sewing-machines.
- *Schmidt & Co. (Pörtner)*, 530, Feb. 27, Sewing- [machines.]
- Pollock, A. & W.*, 1517, June 8, Mordanting turkey-red [cloth, &c.]
- *A. A. & J. F. M.*, 1417, May 26, Dry-closets, &c.
- *J.*, 2117, Aug. 10, Cutting tenons.
- *J.*, 2940, Nov. 2, Printing machines.
- *J. & M.*, 2322, Sep. 2, Furniture.
- *J. & M.*, 2328, Sep. 4, Furniture.
- *J. F. M.*, 623, Mar. 9, Making bricks, &c.
- *J. F. M.*, 2809, Oct. 20, Compressing bricks, &c.
- *J. F. M. & A. A.*, 1417, May 26, Dry-closets, &c.
- *M. & J.*, 2322, Sep. 2, Furniture.
- *M. & J.*, 2328, Sep. 4, Furniture.
- *W. & A.*, 1517, June 8, Mordanting turkey-red [cloth, &c.]
- Pond, M. B., Cantelow, W., & Groat, E. (Haseltine)*, [2583, Sep. 30, Churns.]
- Pontifex, C. & F., & Sherwood, A.*, 1078, Apr. 24, [Washing casks, &c.]
- *F. & C., & Sherwood, A.*, 1078, Apr. 24, [Washing casks, &c.]
- Poole, J. M., & Towle, H. E.*, 877, Apr. 1, Producing [true surfaces on rollers, &c.]
- Porecky, A.*, 152, Jan. 21, Venetian blinds.
- Porter, G.*, 802, Mar. 24, Cutting or ornamenting stone, &c.
- *R., & Lane, T.*, 201, Jan. 25, Gas.
- *W. H.*, 807, Mar. 24, Hydraulic rams.
- Pörtner, J. H. L. T. (Pollack)*, 2932, Nov. 1, Sewing- [machines.]
- *J. H. L. T. (Pollack, Schmidt & Co.)*, 530, [Feb. 27, Sewing-machines.]
- Potter, E. H. (Lake)*, 2599, Oct. 2, Inflammable gases.
- *I. R. (Taber)*, 3417, Dec. 16, Coupling carriage [shafts.]
- Poupard, W., & Thomson, J.*, 1530, June 9, Ventilating.
- *W., & Thomson, J.*, 1609, June 19, Increasing [draught in chimneys.]
- Pout, H. (Rolls)*, 745, Mar. 20, Preserving wood, &c.; [cement,]
- Pow, J. B.*, 2760, Oct. 17, Filtering water; utilizing [sewage.]
- Powell, C.*, 634, Mar. 9, Watches.
- Powell, J. G. (Walker)*, 2648, Oct. 5, Cutting button- [holes.]
- Powers, J. J. (Newton)*, 2988, Nov. 6, Treating cotton [seed.]
- Präger, C. L.*, 739, Mar. 18, Railway brakes.
- Prall, W. E. (Burr)*, 2794, Oct. 19, Steam pump & motor.
- Pratt, C. (Clark)*, 2960, Nov. 3, Distilling naphtha, &c.
- Pratt, D., & Johnson, H.*, 2176, Aug. 18, Thimbles.
- Pratt, E. (Lake)*, 1375, May 22, Paddle wheels.
- Pratt, J. H. (Farmer & Hatcher)*, 1861, July 17, Buttons.
- Prentice, E. H.*, 1215, May 5, Phosphatic manures.
- Prentiss, E. F. (Atkinson)*, 2352, Sep. 6, Telegraph [poles.]
- Prest, J., & Taylor, J.*, 1759, July 5, Polishing saw [blades, &c.]
- Prestige, J. T. & W. A., & Preston, E. J. & F. P.*, 96, [Jan. 13, Discharging ashes from ships.]

Prestige, J. T. & W. A., & Preston, F. P. & E. J.,
[1845, July 14, Waste water preventer taps.
J. T. & W. A., & Preston, F. P. & E. J.,
[1937, July 22, Waste water preventer cisterns.
W. A., & J. T. & Preston, E. J. & F. P.,
[96, Jan. 13, Discharging ashes from ships.
W. A. & J. T., & Preston, F. P. & E. J.,
[1845, July 14, Waste water preventer taps.
W. A. & J. T., & Preston, F. P. & E. J.,
[1937, July 22, Waste water preventer cisterns.
Preston, E. J. & F. P., & Prestige, J. T. & W. A.,
[96, Jan. 13, Discharging ashes from ships.
E. J. & F. P., & Prestige, J. T. & W. A.,
[1845, July 14, Waste water preventer taps.
E. J. & F. P., & Prestige, J. T. & W. A.,
[1937, July 22, Waste water preventer cisterns.
F., 2811, Oct. 21, Furnace fire-bars.
F. P. & E. J., & Prestige, J. T. & W. A.,
[96, Jan. 13, Discharging ashes from ships.
F. P. & E. J., & Prestige, J. T. & W. A.,
[1845, July 14, Waste water preventer taps.
F. P. & E. J., & Prestige, J. T. & W. A.,
[1937, July 22, Waste water preventer cisterns.
Preest, E., & Barjon, V. (Lake), 2219, Aug. 23, Gal-
[vanic batteries.
Price, A. P. (Martins), 3095, Nov. 16, Paving materials.
A. P. & Irvine, R., 2309, Aug. 22, Paper.
A. P., & Nicholson, E. C., 2430, Sep. 15, Safety
[gun-cotton.
A. P., & Stanford, E., 61, Jan. 10, Registering
[games.
E., & Thomas, C., 1424, May 27, Clipping horses.
G. E., 845, Mar. 29, Railway signalling.
J., & Williams, R. P., 2703, Oct. 12, Railways.
Pridgen, H., 3361, Dec. 12, Mangling machines.
Priest, Alfred, & Woolnough, W., 486, Feb. 23, Drilling
[land.
Allen & E., 1791, July 8, Carding-engines.
E. & A., 1791, July 8, Carding-engines.
Priestman, J. & T., 2319, Sep. 2, Rolling leather.
J. & T., 3296, Dec. 7, Preparing hides and
[skins.
T. & J., 2319, Sep. 2, Rolling leather.
T. & J., 3296, Dec. 7, Preparing hides and
[skins.
Prince, G., 3293, Dec. 14, Perambulators.
Pringle, H., 33 Jan. 13, Horse-shoes.
Pridgen, C. K., (Tom Martin), 2223, Oct. 31, Fire-arms.
Piquet, P. N., 2233, Aug. 28, Pins, nails, rivets,
[screws &c.
Pritchard, A., 3280, Dec. 5, Clarks for bottles &c.
C. (Keweenaw), 1904, July 20, Land scarifiers &c.
Pruyett, M. (Gilbert), 2338, Oct. 23, Harmoniums &c.
M., & Newman, R. A. (Lake), 2331, Oct. 24,
[Sewing-machines.
Pruett, T. E., 267, Feb. 14, Breaking up the soil.
Pruett, W., 2444, Aug. 26, Pulverizing or mixing.
W., 2445, Sep. 13, Conducting and distributing
[fluids.
W., 2331, Dec. 1, Passing fire driving bands &c.
Pruett, W. H., & Statney, J. V., 2653, Aug. 7, Curing
[tanned.
Pruett, P. C., 266, Apr. 4, Constructing roads.
Pruett, L. L. H., Statney, J. V., & Nepp, I.
(Clark), 2663, Nov. 4, Phosphate of ammonia.
Punderson, F., Wilcock, N. G., & Curran, J. F., 2443,
[Nov. 4, Boiling several kinds of stoppers.
Purvis, W. F., & Wines, F. L. (Lake), 1773, Apr. 22,
[Stoves and stoves.
Purvis, J. E., 514, Mar. 23, Sewing-machine attachment.
Purvis, E. W., & Ayres, J. W., 1408, May 23, Sewing
[machine.

Pullman, G. M. (Lake), 1523, June 8, Railway sleeping
[carriages.
G. M. (Lake), 1524, June 8, Railway hotel
[carriages.
Pulvermacher, I. L., 1460, June 1, Electric, galvanic,
[and magnetic chains, &c.
Pumphrey, J., 330, Feb. 8, Watering cans and garden
[engines.
Punshon, R., 820, Mar. 27, Ships' compasses.
R., 3407, Dec. 16, Preserving meat.
Purdey, J., 2952, Nov. 3, Rifled fire-arms.
Purkis, R. A., 3451, Dec. 20, Refrigerating.
Purves, J., 1805, July 11, Ashes hoist.
Purvis, W., 734, Mar. 18, Medicinal biscuit.
Putnam, H. W., 1439, May 30, Wire bottle-stopper
[fastenings.

Q

Quilaverth, N. (Gedge), 2698, Oct. 11, Preserving sub-
[stances.
Quin, J., & Eastham, R., 44, Jan. 9, Railway signals.
J., & Eastham, R., 356, Feb. 11, Hose and similar
[piping.
Quinn, E., 1703, June 30, Double cranks.
Quiri, J. (Gedge), 2491, Sep. 21, Dressing staves for
[casks.
Quirin, G., & Escl, J., 1934, July 22, Oil lamps.

R

Radeliffe, W. J., & Roeliffe, 2973, Nov. 4, Engraving
[dies, &c.
Radford, R. H., 560, Mar. 2, Rolling metal rails, bars, &c.
T., 2450, Sep. 20, Creel and other frames.
Radinger, J. (Newton), 3462, Dec. 21, Engine valve gear.
Rae, M., & Pender, J., 3398, Dec. 15, Artificial asphalt.
Ragg, A. E., 2052, Aug. 3, Weighing letters, &c.
Ramsbotham, J. M., 1898, July 20, Steam-ploughs.
Ramsbotham, J., 1740, July 4, Motive-power engines;
[pumping.
Ramsden, J. C., 223, Jan. 27, Looms.
J. C., 569, Mar. 4, Looms.
J. C., 1109, Apr. 27, Looms.
J. C., 1371, May 22, Looms.
J. C., 2177, Aug. 30, Weaving pile fabrics.
Ramsdell, C. A., & Foster, T. M. (Lake), 1474, June 2,
[Telegraphic printing.
Ramsdell, W., 281, Feb. 2, Agricultural tools.
Ramsdell, W., 63, Jan. 13, Preventing explosions in boilers.
Ramsdell, C., 2737, Oct. 14, Steam-carriages and rail
[locomotives.
Ramsden, F., & Kappa, R., 2263, Aug. 31, Mill-stones.
J. E., 1456, June 1, Flaming and tiling land.
Raper, J., & Stephenson, J., 313, Feb. 7, Furnace bars.
Rasch, D. E., 121, May 1, Locking sails, strong rooms, &c.
Rath, F., (Keweenaw), 1868, June 23, Plaided fabrics.
Rattray, J., 348, Feb. 13, Corks and other stoppers.
Rat, E., 2502, Sep. 4, Pressure and vacuum gauges.
Ray, J., & Edwards, E., 1436, May 4, Railway signals.
Rawcliffe, J., Ridd, W., & Fleming, A., 1791, July 4,
[Mules for spinning.
Rawlings, H. D., 1784, June 27, Filing devices.
Ray, A. (Keweenaw), 1447, Sep. 3, Pressing textile materials.
Reed, G., & Nield, J. J., 2260, Dec. 4, Signaling.
Reed, L., 226, Jan. 24, Reservoirs or dumping wells.

Reckendorfer, J. (Johnson), 498, Feb. 24, Pencils.
 — J. (Johnson), 2830, Oct. 23, Pencil and [eraser].
 Redpath, S. I., 994, Apr. 14, Knitting socks, &c.
 — S. I., 2729, Oct. 14, Knitting socks, &c.
 Reed, G. W., & Gilbody, A. H., 1295, May 13, Refrigerators, &c.
 Reed, J., & Bate, J. L., 3098, Nov. 16, Axles.
 — J. V. D., 3220, Nov. 28, Circular looms.
 Reeves, J., 3278, Dec. 5, Combined plough & seed-sower.
 Reichert, C., & Lang, F., 2342, Sep. 5, Pressure gauges.
 Reid, A., & Cleghorn, J., 3440, Dec. 19, Treating asbestos.
 — G. A., 138, Jan. 19, Sheep dip.
 — H., 3434, Dec. 19, Portland cements, &c.
 — M., 875, Apr. 1, Registering the game of croquet.
 — T., 1220, May 5, Ploughs, &c.
 — T., 1711, July 1, Ploughs.
 Reilly, J., 403, Feb. 16, Wood chairs.
 Reinlein, G., 1376, May 23, Pumps.
 Reinlein, G. (Aramburu), 84, Jan. 12, Cartridge-pouches.
 Reixach y Gispert, J., & Lister, S. C., 1117, Apr. 27, Looms.
 Rendel, G. W., 828, Mar. 28, Torpedoes.
 — G. W., 981, Apr. 13, Torpedoes.
 Rendle, J. E., & Burrows, A., 3002, Nov. 7, Glazing build-ings, &c.
 Rennie, J., 541, Feb. 28, Furnaces.
 — W., 3422, Dec. 18, Propelling vessels.
 Reusselaer, R. A. van (Newton), 2598, Oct. 2, Sad-irons.
 Restell, T., 639, Mar. 10, Fire-arms and cartridges.
 Reuss, E. G., 3035, Nov. 10, Spinning machines.
 Revell, J., & Collin, J., 1992, July 28, Lubricating.
 Reynolds, W. F., & Mays, J. A., 1342, May 18, Wheels, [axles, &c].
 Rhodes, J. A., 106, Jan. 14, Ornamentation of metals.
 — W. H., & Curtis, M., 2154, Aug. 16, Preparing [fibres].
 Rice, N. B., & Driggs, W. S. (Clark), 1009, Apr. 15, [Treating bones, horn, pith, &c].
 Richards, J., Lawrence, G., & Lingard, J., 935, Apr. 8, [Jewellery].
 — S., 239, Jan. 30, Spinning and doubling.
 — W., 1572, June 14, Fire-arms and cartridges.
 — W. F., & Harrington, J., 2538, Sep. 26, Imi-tation leather, &c.
 Richardson, J. T. H., 1291, May 13, Lenses for lamps.
 — J. W. & T., & Spencer, A., 1788, July 8, [Revolving puddling furnaces].
 — M., 2155, Aug. 16, Pressing bricks, tiles, &c.
 — T. & J. W., & Spencer, A., 1788, July 8, [Revolving puddling furnaces].
 — W. H., 18, Jan. 4, Treating ligneous mate-rials, &c. for paper.
 Richmond, T., & Sagar, B., 1061, Apr. 22, Washing ma-chines.
 — T., & Cooper, W. B., 130, Jan. 18, Looms.
 Ricketts, J., 3163, Nov. 22, Combined inkstand, pen [tray, &c].
 Riddell, W., 923, Apr. 6, Treating fibres for paper-pulp.
 — W., 1839, July 14, Paper-pulp.
 — W., 3303, Dec. 7, Paper pulp; chloride of lime, &c.
 Rider, A. K., 164, Jan. 21, Air and gas engines.
 Rider, J. B. (Lake), 2191, Aug. 19, Breaking & cubing [stone].
 Ridley, J. C., 160, Jan. 21, Iron and steel.
 Ridsdale, J., 370, Feb. 14, Steam-engines.
 Rieber, J., 2781, Oct. 18, Aerial navigation.
 Rieux, E. J. J. B. D. du, & Roettger, C. E. (Brookes), 2378, Sep. 8, Filtering presses.
 Rigby, J., 1098, Apr. 26, Fire-arms and cartridges.
 Riley, J., & Laycock, W., 1030, Apr. 19, Printing fa-brics, &c.
 — J. H., 895, Apr. 4, Folding or "plaiting" fabrics.

Rimmel, E., & Carteron, J. A., 115, Jan. 16, Waterproof [fabrics].
 — E., & Carteron, J. A., 118, Jan. 17, Rendering [materials uninflamable, &c].
 Ripley, A., 2371, Sep. 7, Portable punches.
 — R., 781, Mar. 22, Preparing & packing alkalies & [acids].
 Ritchie, C., 185, Jan. 24, Stoves.
 — G., 1404, May 25, Tents.
 — G. & J. G., 496, Feb. 24, Tents, umbrellas, &c.
 — J. G. & G., 496, Feb. 24, Tents, umbrellas, &c.
 — R., 442, Feb. 20, Skates.
 Roadknight, W. A., 8, Jan. 3, Hats.
 Robb, J., Masson, A., & Jarvis, J., 1568, June 14, Strain-ing pulp.
 Roberts, C. F., 341, Feb. 9, Life-boats.
 — E., 2066, Aug. 5, Heating apartments; fire-places.
 — L., 524, Feb. 27, Charcoal retorts and kilns.
 — J., 2907, Oct. 30, Floating swimming baths.
 — L., Armitage, E., & Haley, J., 2917, Oct. 31, [consuming smoke].
 — R., & Shaw, D., 172, Jan. 23, Looms.
 — T., 2135, Aug. 14, Filtering liquids.
 — T., 3148, Nov. 21, Closed stoves.
 — W., 3325, Dec. 9, Valve for cisterns.
 Robertson, A., 690, Mar. 15, Applying heat and cold; [pessaries, &c].
 — D., 2682, Oct. 10, Slotting, shaping and [planing].
 — James, 759, Mar. 21, Repairing knottor bot-toms in paper making.
 — James, 1528, June 9, Turning, boring, grind-ing, &c.
 — John, 1746, July 4, Finishing textile fabrics, &c.
 — Joseph B., 1608, June 19, Sewing machines.
 Robertson, L. F. (Lake), 2298, Aug. 31, Treating hides.
 Robertson, R. A., 3232, Nov. 29, Evaporating liquids.
 — R. A., & Duncan, J., 3197, Nov. 25, Reburn-ing charcoal.
 Robin, A. J. J. (Gedge), 1558, June 12, Lime-kilns.
 Robins, W. B., 677, Mar. 14, Portable and hand pumps.
 Robinson, A. H., 2757, Oct. 17, Preventing fraud in col-lecting accounts.
 — J., & Somerville, J., 3335, Dec. 9, Charging [retorts, &c].
 — J., & Smith, J., 2953, Nov. 3, Cutting wood [for paper].
 — L., & Walker, D., 798, Mar. 24, Bale stillages.
 — P. & W., & Skinner, C., 1121, Apr. 27, Pic-ture frames, &c.
 — T., 2658, Oct. 7, Steam-boiler furnaces.
 — T., & Hargreaves, J., 1733, July 4, Sulphates.
 — T., & Hargreaves, J., 1854, July 15, Absorb-ing gases by solids.
 — T., & Hargreaves, J., 1920, July 21, Sulphuric [acid and sulphates].
 — T., & Hargreaves, J., 1923, July 21, Treating [ores].
 — T., & Hargreaves, J., 1928, July 22, Sulphates.
 — T., & Hargreaves, J., 2329, Sep. 4, Chlorine.
 — W., 149, Jan. 20, Puddling iron.
 — W., 253, Jan. 31, Steam-trap.
 — W., 700, Mar. 16, Regulating feed water to [boilers].
 Robinson, W. (Clark), 2280, Aug. 30, Railway signals.
 Robinson, W. & P., & Skinner, C., 1121, Apr. 27, [Picture frames, &c].
 — W. B., 2262, Aug. 28, Cylinders or rings of [boxes].
 Robson, S. S., 1146, Apr. 28, Raising, &c. ships' boats.
 — S. S., & Berwick, G., 1901, July 20, Preserving [composition].

Robson, W., 900, Apr. 5, Slide-valves.
 Rock, J., 876, Apr. 1, Desiccating and refrigerating sub-
 [stances, &c.
 Rockliff, W., 571, Mar. 3, Link-motion for engines.
 Rocliffe, J. H., & Radcliffe, W. J., 2973, Nov. 4, En-
 [graving dies, &c.
 Roeckner, C. H., 119, Jan. 17, Woollen-faced rollers.
 Roettger, C. E., & Du Rieux E. J. J. B. D. (Brookes),
 [2378, Sep. 8, Filtering presses.
 — E. (Murdoch), 992, Apr. 14, Refrigerating.
 — E. (Murdoch), 2701, Oct. 11, Refrigerating.
 Roettger, E., & Bandot, E., 2531, Sep. 25, Motive-power.
 Roff, S., Hoffman, W. B., & Lukey, J. (Haseltine), 2408,
 [Sep. 12, Indicating weight of cargo.
 Rogers, B. W., 1280, May 12, Bolt-screwing machinery.
 Rogers, C. D., Wilkins, M. P., Harvey, H. A. (Newton),
 [2501, Sep. 22, Brushes.
 Rogers, D., Monington, J., & Weston, J., 1106, Apr. 27,
 [Pianos.
 — J., & Soares, G. de M., 2586, Sep. 30, Asphalt
 [paving.
 Rogers, Samuel (Lake), 339, Feb. 9, Wire fabrics for
 [mattresses, &c.
 Rogers, Silas, 1284, May 12, Horse-shoes.
 — Silas, 1921, July 21, Clocks, watches, &c.
 — Silas, 1924, July 21, Self-acting couplings.
 — Silas, 1926, July 22, Window-sashes.
 — Silas, 1927, July 22, Brakes for vehicles.
 — Silas, 3236, Nov. 30, Self-acting railway coupling.
 — Simon, A., & Lee, R. B., 1597, June 16, Metal
 [pillars, posts, &c.
 Rollason, A., & Townsend, C., 2972, Nov. 4, Water-
 [proofing, &c. fabrics.
 — J. G., Morley, A. E., & Ellis, J. R., 1182,
 [May 3, Locketts, &c.
 — W., & Brough, N., 2524, Sep. 25, Box for
 [matches, pens, &c.
 — W., & Brough, N., 2820, Oct. 21, Box for
 [matches, &c.
 Rolls, J. G. (Pout), 745, Mar. 20, Preserving wood, &c.;
 [cement.
 Ronald, W. H., 2695, Oct. 11, Umbrellas and sunshades.
 Ronchetti, J. O., 50, Jan. 10, Railway signals.
 — J. O., 51, Jan. 10, Railway signals.
 Roots, F. M. & P. H. (Lake), 2691, Oct. 11, Forge,
 [tuyere and fire-bed.
 — P. H. & F. M. (Lake), 2691, Oct. 11, Forge
 [tuyere and fire bed.
 Rosenberg, J. E., & Vazquez, A., 3387, Dec. 14, Pre-
 [serving meat, &c.
 Rosing, U. F. A., 2061, Aug. 4, Cultivating land, &c.
 Ross, A. & Uley, M. H. (Lake), 2238, Aug. 25, Electro-
 [magnetic motors.
 — J. P. (Haseltine), 86, Jan. 12, Agricultural implements.
 Ross, T., 2685, Oct. 10, Producing pictures in motion, &c.
 Rostron, W., & Hargreaves, J., 618, Mar. 8, Preventing
 [railway accidents.
 Rothery, A. & J. 1471, June 2, Cutting coal, stone, &c.
 — J. & A., 1471, June 2, Cutting coal, stone, &c.
 Rothwell, W. G., 1929, July 22, Motive-power.
 — W. G., 2825, Oct. 23, Screw-propellers.
 Rousseau, L. A. & L. A. (Abel), 2229, Aug. 25, Steam-
 [engines.
 Rousselot, T. (Smith), 790, Mar. 23, Extracting cane juice.
 Routledge, H., & Ommannney, F. F., 361, Feb. 13, Steam
 [valves.
 Rowan, F. J., 1808, July 11, Tramway cars.
 — T., 324, Feb. 8, Pigments.
 — T., 785, Mar. 22, Utilizing bye products of alkali, &c.
 — T., 1066, Apr. 22, Obtaining steel.
 — T., 1067, Apr. 22, Manganese compounds,
 — T., 2384, Sep. 9, Utilising bye products of alkali, &c.

Rowatt, T., 77, Jan. 12, Horse-shoes.
 — T., 569, Mar. 3, Oil lamps.
 Rowe, G. R. G., 653, Mar. 11, Spring clip for papers, &c.
 — J., 1206, May 4, Flour.
 — N., & Bennett, J. J., 2780, Oct. 18, Asphalt paving.
 Rowell, C. C., & Duncan, W. (Haseltine), 3108, Nov. 16,
 [Alarm for safes.
 Rowland, E., 512, Feb. 25, Furnace fire-grates.
 Rowley, J., & Humphrey, J., 893, Apr. 4, Measuring
 [liquids.
 Ruck, W. D., 3504, Dec. 28, Gas.
 Rudge, J. F., & Dorrell, J., 1431, May 29, Slabbing and
 [blooming iron.
 Rueger, J. G., & Gaensly, H. (Clark), 2199, Aug. 21,
 [Box-irons.
 Rumine, P., 1363, May 20, Ozone.
 — P., 1467, June 2, Treating alcoholic liquors.
 Rumney, R., & Pearson, J., 2400, Sep. 12, Mules for
 [spinning.
 Rushton, T. H., & Tonge, R., 375, Feb. 15, Spinning.
 Russ, E., Morris, T. S., & Hammond, H. & E., 766,
 [Mar. 21, Fire-arms and cartridges.
 Russell, John & W., 3364, Dec. 12, Calcining furnaces.
 — Joseph, 43, Jan. 7, Preventing explosions in boilers.
 — R., 1587, June 15, Drying paper, cardboard, &c.
 — S., 1553, June 12, Perspective drawings.
 — W. & J., 3364, Dec. 12, Calcining furnaces.
 Rycer, A. (Abel), 3452, Dec. 20, Admitting steam to
 [cylinders.
 Ryder, J., 3079, Nov. 15, Lathes.
 Rydill, G., 2752, Oct. 17, Treating woollen piece goods, &c.
 — G., 2753, Oct. 17, Treating wool, woollen rags, &c.
 — G., 2754, Oct. 17, Treating wool, woollen and
 [silk rags, &c.
 — G., 2807, Oct. 20, Drying & cleaning substances.
 Ryerson, V. B. (Newton), 1195, May 3, Pulverising
 [ores, &c.
 Rylands, T. G., 756, Mar. 21, Stretching & testing wire.

S.

Sacc, F. (Hugentobler), 3454, Dec. 20, Preserving meat, &c.
 Sagar, B., & Richmond, T., 1061, Apr. 22, Washing
 [machines.
 Sage, J., 2742, Oct. 16, Shuttles.
 Sala, Dalmau y (De Bergue), 1551, June 12, Supplying
 [water to steam-boilers.
 Salamon, W. (Lake), 1715, July 1, Lubricating compound.
 Salmon, P., 695, Mar. 16, Oil-gas engines and boilers.
 Salter, J., 2204, Aug. 22, Surgical trusses.
 Salvesen, C., Irvine, R., MacLagan, R. C., Fleming, A. B.,
 [Turnbull, G. V., 1451, May 31, Lubricants
 [for wool.
 Samain, P., 661, Mar. 13, Fire-arms.
 Samels, A. E., 2955, Nov. 3, Adjusting door knobs, &c.
 Sampson, T., 2434, Sep. 15, Dyeing fabrics in the piece.
 Sams, J. H., 449, Feb. 21, Sowing machines; horse-hoes.
 — J. H., 3271, Dec. 5, Spanner or nut key.
 Samuel, W. H., 314, Feb. 6, Continuous matches and
 [holders.
 Samuels, P. H., 1569, June 14, Spring mattress.
 Sanders, G. N., 837, Mar. 29, Mining and field service
 [tools.
 — G. N., 844, Mar. 29, Projectiles for fire-arms.
 — J. H., 2465, Sep. 19, Carriages.
 Sanderson, H. S., 964, Apr. 12, Black lead.
 — S., 1899, July 20, Extinguishing fire.
 Sands, J. I., 3099, Nov. 16, Wheels for steam carriages,
 [engines, &c.

Sanford, J. T., & Goodwin, W. F. (Lawson), 3024, [Nov. 9, Canal boats.
 Sanson, R. B., 2036, Aug. 2, Pressing, smoothing, and [finishing garments.
 Sapp, L. W. (Lake), 1639, June 22, Sewing-machines.
 Sargeant, C. (Ward), 1060, Apr. 22, Sheep-shears, &c.
 Sargent, J. B. (Hughes), 1640, June 22, Castors.
 Sarney, S. E. & T. S., 711, Mar. 16, Bedsteads, sofas, &c.
 — T. S., 851, Mar. 30, Joints for railway rails.
 — T. S. & S. E., 711, Mar. 16, Bedsteads, sofas, &c.
 Saul, D. H., 1022, Apr. 18, Bottles & stoppers for gum, &c.
 Saunders, H., 463, Feb. 22, Track clearers for tramways [or railways.
 Saunders, I. J. (Lake), 2671, Oct. 9, Boot and shoe [fastenings.
 Saunders, R., 1835, July 13, Horse-shoes.
 — R., 2270, Aug. 29, Steering ships.
 Savage, W. P., 391, Feb. 16, Sails for ships.
 Sawyer, B., 1696, June 29, Sewing-machines.
 Sawyer, C. E., Perkins, E. L., & Moulton, J. H. (Haseltine), [528, Feb. 27, Steam-traps.
 Sawyer, F. A., 3073, Nov. 15, Restoring spent indigo.
 Sax, J., & Hamilton, A., 1027, Apr. 18, Cabs, &c.
 — J., & Hamilton, A., 1574, June 14, Signalling.
 Saxby, J., 1601, June 17, Railway points and signals.
 — J., 1655, June 23, Railway points and signals.
 Senife, J., & Younger, T. C., 89, Jan. 13, Washing, [wringing, &c.
 — J., & Younger, T. C., 502, Feb. 25, Packing [pistons, &c.
 Seantlebury, W., 2905, Oct. 30, Harmoniums.
 Schaeffer, B. A., & Budenberg, C. F. (Budenberg), 456, [Feb. 22, Steam-engine indicators.
 Schaeffer, B. A., Budenberg, C. F., & Broadbent, J. K., [681, Mar. 15, Pressure gauges.
 Scharf, S. R., & Vandemark, A. B. (Lake), 2554, Sep. 28, [Artificial asphalt.
 Scharr, J., 701, Mar. 16, Liquid soap.
 Scheller, R. (Lake), 309, Feb. 4, Condensed soup.
 Schettler, F. R. (Newton), 610, Mar. 7, Arresting trains.
 Schlesinger, A. A. (Schlesinger), 1729, July 3, Files or [clips.
 Schlesinger, W. J. (Dixon), 1728, July 3, Mixer for [edible compounds.
 — W. J. (Schlesinger), 1729, July 3, Files or [clips.
 — W. J. (Dixon), 1739, July 4, Soap dishes.
 Schmid, A. (Johnson), 906, Apr. 5, Motive-power engine or pump.
 Schmidt, J. (Jensen), 3082, Nov. 15, Ploughing implement, &c.
 — Pollack & Co. (Pörtner), 530, Feb. 27, Sewing-machines.
 Schmitz, E. N., 1724, July 3, Gas-engines.
 Schmolle, L. B., 139, Jan. 19, Delivering thread from reels.
 Schueeweiss, C. (Molchin), 3529, Dec. 30, Composition oil.
 Schneider, F. (Taylor), 1288, May 13, Paper collars and [fronts.
 Schofield, J., & Mellor, W., 3031, Nov. 9, Folding, &c. [fabrics.
 Schollar, G. W., & Slater, E. A., 2272, Aug. 29, Umbrellas.
 Schröder, J., & Weinrich, L. (Hughes), 1185, May 3, Sugar.
 Schuman, S., 2551, Sep. 28, Furling woollen & hair fabrics.
 Schützenberger, P., & De Lalonde, F., 3377, Dec. 13, [Indigo printing and dyeing.
 Schuurman, D. A. W., 3306, Dec. 7, Ornamenting fabrics.
 Schwartz, C. E. & C. R., 539, Feb. 28, Metal frames of [purses, &c.
 — C. R. & C. E., 539, Feb. 28, Metal frames of [purses, &c.
 Schwartz, M. (Lake), 3292, Dec. 6, Rotary steam-engine.
 — P. (Mills), 190, Jan. 25, Boots and shoes.

Schwartz, T., 1179, May 2, Acetic acid, &c.
 Scott, G. L., 2647, Oct. 5, Ventilating mines and tunnels.
 — G. L., 3428, Dec. 18, Ventilating mines, tunnels, &c.
 — H. Y. D., 2243, Aug. 26, Obtaining manure and [cement from sewage.
 — H. Y. D., 2660, Oct. 7, Treating refuse gas lime.
 — H. Y. D., 3515, Dec. 29, Treating sewage-water.
 — James, 2736, Oct. 14, Floating dock.
 — James E., 603, Mar. 7, Ship-building.
 Scott, John (Lake), 1503, June 6, Hoisting machines.
 Scott, John, & Mirfield, M., 2394, Sep. 11, Recovering [grease from suds, &c.
 — R., 2086, Aug. 8, Treating oils.
 — T., 3402, Dec. 15, Rails.
 — T., 3403, Dec. 15, Tramways.
 — W., 1691, June 28, Guns.
 Scribner, G. W. (Lake), 1491, June 5, Harmoniums, &c.
 Scruton, T., 2399, Sep. 12, Coffins.
 Searle, T. J., 1580, June 15, Bedsteads.
 Seville, C. F. (Johnson), 2908, Oct. 30, Paving and [asphalting roads, &c.
 Seddon, T., 716, Mar. 17, Opening and cleaning cotton.
 Seed, J., & Norris, C., 1093, Apr. 25, Spinning mules.
 — W., 1483, June 3, Spinning and doubling.
 Seekings, J. J., 1256, May 10, Making bolts, nuts, bale [hoops, &c.
 Seel, E., & Shaw, T., 417, Feb. 17, Tuyeres.
 Seibert, N. (Newton), 796, Mar. 23, Lubricators.
 Seitz, C. D. J., 145, Jan. 20, Paper-pulp.
 Selby, G. E., & Nutt, J. H., 71, Jan. 11, Horse-hair wrappers.
 Selden, W. C., 2967, Nov. 4, Treating water of condensed [steam.
 Selfe, F., 3389, Dec. 14, Fastenings for jewellery.
 Seligman, H., & Bastet, L. (Newton), 2759, Oct. 17, [Electric batteries.
 Sellars, J. C., 1817, July 12, Metal founders' blacking.
 — J. C., 2500, Sep. 22, Charring peat.
 Sellers, J., & Hopkinson, E., 2816, Oct. 21, Effecting [calculations.
 Sellers, W. (Johnson), 2612, Oct. 3, Puddling iron.
 — W. (Johnson), 3196, Nov. 25, Iron and steel.
 Serre, A. (Chagnaud), 2610, Oct. 3, Harness.
 Seward, W. L. (Pearson), 2111, Aug. 10, Seed planters.
 Seyd, E. (Brandreth), 2938, Nov. 1, Medical plasters, &c.
 Shackleton, J., 1309, May 15, Warming railway cars.
 — W., 1334, May 17, Looms.
 — W. M., & Fawcett, T. C., 269, Feb. 1, Moulding [clay, &c.
 Shakespeare, J. D., 986, Apr. 13, "Laying" ordnance.
 — T., & Illston, G., 1057, Apr. 21, Sewing-machines.
 Shand, J., 2902, Oct. 30, Fire-escapes.
 Shanks, J., 2471, Sep. 20, Bath fittings.
 — J., 2968, Nov. 4, Water-closets.
 — W., 220, Jan. 27, Cutting metal bars.
 Sharkey, P. H., 284, Feb. 2, Suspenders of scale-beams.
 Sharp, T. B., 159, Jan. 21, Steam-boiler injectors.
 Sharrock, S., 2089, Aug. 8, Telegraph posts.
 Sharrocks, D., 288, Feb. 2, Rivets.
 Shaw, D., & Roberts, R., 172, Jan. 23, Looms.
 — G. & T., 1826, July 12, Substitutes for horse hair, &c.
 — H., 1497, June 6, Retarding railway carriage wheels.
 — J. W. W. (Watteau), 2798, Oct. 20, Treating hides [and skins.
 — J. W. W. (Watteau), 3288, Dec. 6, Treating hides [and skins.
 — J. W. W. (Watteau), 3477, Dec. 22, Treating hides [and skins.
 — R., & Bowden, J., 1427, May 27, Felt hats, &c.
 — R. H., & Burton, R., 1412, May 26, Traction [engine wheels.
 — S., 3405, Dec. 15, Looms.

Shaw, T. & G., 1826, July 12, Substitutes for horse hair, &c.
 — T., & Seel, E., 417, Feb. 17, Tuyeres.
 — T. R., & Boardman, S., 1283, May 12, Lubricators.
 Shelley, J., & Bullock, M. C. (Haseltine), 3270, Dec. 4,
 [Excavating rocks, &c.]
 Shelton, C. T. (Hughes), 985, Apr. 13, Driving-whips.
 Shepard, J. (Smith), 2125, Aug. 11, Umbrellas.
 Shephard, R., 1689, June 28, Looms.
 Shepherd, J., 2533, Sep. 26, Separating water from steam.
 Sherring, W. A., Horstman, H., & Blakemore, R., 2379,
 [Sep. 8, Locking and unlocking bolt-nuts.]
 Sherwin, P., & Sutton, J. M., 297, Feb. 3, Treating sewage.
 Sherwood, A., & Pontifex, C. & F., 1078, Apr. 24, Washing
 [casks, &c.]
 — E. P., 551, Mar. 1, Preparing clay, making
 [bricks, &c.]
 Shield, J. C., & Williamson, J. & E., 2192, Aug. 21, Looms.
 Shill, R. E., & Moy, T., 2762, Oct. 18, Steam-engines.
 — R. E., & Moy, T., 3238, Nov. 30, Aërial navigation.
 Shive, D., 1803, July 10, Governors and governor valves.
 — D., 1990, July 28, Detecting absence of employes.
 Sholl, C., 1495, June 5, Compressed air hammers.
 Shore, J., 2215, Aug. 23, Tapping and venting casks, &c.
 Short, J. (Clark), 2792, Oct. 19, Looms.
 Shute, R. G., 331, Feb. 8, Cutting mitres.
 Shuttleworth, J., & Clayton, N., 165, Jan. 21, Thrashing
 [and winnowing.]
 — J., & Clayton, N., 2001, July 29, Steam-
 [engines.]
 Sibert, J., 2136, Aug. 14, Dressing lace.
 Sidebottom, J., 2636, Oct. 5, Steam-boiler furnaces.
 Siebe, H. H., Gorman, W. A., & Christy, T., 3441, Dec. 20,
 [Raising sunken vessels.]
 Siecznoski, C. L. (Frizac), 697, Mar. 16, Forges.
 Siemens, C. W., 292, Feb. 2, Cast steel.
 — C. W., 1959, July 26, Smelting iron ores.
 — C. W., 3077, Nov. 15, Treating iron ores and
 [pig metal.]
 Siemssen, G., 965, Apr. 12, Indicating high temperatures.
 Siovier, H. G., 2475, Sep. 20, Umbrellas and parasols.
 Sigl, G. (Hughes), 1641, June 22, Valves.
 Silas, F., 504, Feb. 25, Writing in ciphers.
 Silber, A. M., & White, F., 2007, July 31, Lighting
 [apparatus.]
 — A. M., & White, F., 3254, Dec. 1, Heating,
 [cooking and lighting.]
 Silk, E., & Wells, G., 1452, May 31, Charcoal box irons.
 Simmons, G. W. & W., & Smith, G., 2689, Oct. 10,
 [Zincographic printing.]
 — W. & G. W., & Smith, G., 2689, Oct. 10,
 [Zincographic printing.]
 Simon, H. (Egan), 3141, Nov. 21, Metallic springs.
 Simonds, W. E. (Weaver), 1563, June 13, Governors.
 Simpson, C. G. C. (Lake), 1388, May 23, Disintegrators.
 Simpson, John, 147, Jan. 20, Skates.
 — John, 2009, July 31, "Saddle" boilers.
 Simpson, John (Teague), 1492, June 5, Vices.
 Simpson, Joseph, 2536, Sep. 26, Hydraulic presses.
 — Joseph, 3390, Dec. 14, Iron fencing.
 — T., 2390, Sep. 11, Brushes.
 — W., & Gardner, A., 3304, Dec. 7, Steam and
 [other engines.]
 Sims, F. M., 3185, Nov. 24, Shoes for men and animals.
 — F. M., & Yockney, S. H., 872, Apr. 1, Signalling.
 Sinclair, G., 1666, June 24, Treating spent ley from
 [paper stock.]
 — G., 1930, July 22, Boilers or heating vessels, &c.
 — H., & Wilde, J., 2442, Sep. 16, Level and
 [angle indicators.]
 — J., & Stapfer, H., 1203, May 4, Raising beer, &c.
 — J., & Stapfer, H., 2837, Oct. 24, Withdrawing
 [ale, &c.]

Singleton, T., 3312, Dec. 7, Signalling on railways, &c.
 Sisco, E., Heald, G. W., & Morris, W. F. (Abel), 3189,
 [Nov. 24, Pumps.]
 Skelton, T. A., 1087, Apr. 25, Lamps for streets, &c.
 Skinner, C., & Robinson, P. & W., 1121, Apr. 27,
 [Picture frames, &c.]
 — P. K. M., 1170, May 2, Steering ships.
 — R., 1795, July 8, Artificial stone.
 Skwarcow, J., & Baranowski, J. J., 3021, Nov. 9,
 [Capsules.]
 Slagg, C., 2697, Oct. 11, Applying river currents to
 [pump water.]
 Slater, B., 461, Feb. 22, Regulating the turning of
 [cocks, &c.]
 — E. A., & Schollar, G. W., 2272, Aug. 29, Umbrellas.
 — G., 1356, May 20, Sewing-machines.
 — J., & McNeile, A., 1168, May 2, Wheels and
 [axle-boxes.]
 — S., 2710, Oct. 13, Excluding draughts from
 [doors.]
 Slatery, J. V., & Prossor, W. H., 2083, Aug. 7, Curing
 [bacon.]
 Slawson, J. B. (Newton), 1263, May 10, Fare receptacle.
 Sleigh, W. A. W., 1054, Apr. 21, Signalling to drivers,
 [&c. of road vehicles.]
 Slingerland, J. T. (Haseltine), 410, Feb. 16, Distribut-
 [ing type.]
 Sloper, B. G., & Washer, F. J. J., 329, Feb. 8, Treat-
 [ing sewage.]
 Small, J. H. (Haseltine), 124, Jan. 18, Alarm ticket
 [punches.]
 Smart, J., 1730, July 3, Packing for stuffing boxes.
 — J. A., 2143, Aug. 15, Extracting grease from
 [leather.]
 Smart, P. (Johnson), 2282, Aug. 30, Paint.
 Smee, A., 182, Jan. 24, Supplying water.
 Smith, A. R. P., & Granville, C. W., 365, Feb. 14,
 [Paper-pulp.]
 — A. R. P., & Granville, C. W., 372, Feb. 14,
 [Cleaning cotton, &c.]
 — B., H. & I., & Bradley, C., 902, Apr. 5, Wool
 [combing.]
 — B., H. & I., & Bradley, C., 1865, July 17,
 [Combing silk, &c.]
 — C. Mc K., 274, Feb. 1, Services for washstands, &c.
 Smith, C. W. M. (Lake), 1017, Apr. 17, Axles and
 [axle boxes.]
 — C. W. M. (Lake), 1058, Apr. 21, Sewing-machines.
 Smith, D., 427, Feb. 17, Railway rails.
 — D. & J., 1338, May 18, Moulding.
 — E. H., 206, Jan. 26, Printing-presses.
 Smith, E. J. (Chipman), 1714, July 1, Postal envelopes.
 — G. (Woodbury), 948, Apr. 11, Barometer or
 [hygrometer.]
 Smith, G., & Simmons, W. & G. W., 2689, Oct. 10,
 [Zincographic printing.]
 — G. E., 2670, Oct. 9, Gas-burners.
 — G. S. F., 808, Mar. 25, Screw-nuts.
 — Henry, I. & B., & Bradley, C., 902, Apr. 5,
 [Wool combing.]
 — Henry, I. & B., & Bradley, C., 1865, July 17,
 [Combing silk, &c.]
 Smith, Henry N., Carver, B. F. & McCune, C. W.
 [(Clark), 1441, May 30, Eyelets.]
 Smith, Hubert E., 662, Mar. 13, Ballot voting.
 — Hugh, 2997, Nov. 7, Treating sewage.
 — I., B. & H., & Bradley, C., 902, Apr. 5, Wool
 [combing.]
 — I., B. & H., & Bradley, C., 1865, July 17,
 [Combing silk, &c.]
 Smith, James (Lake), 3366, Dec. 12, Galvanic batteries.
 Smith, James & D., 1338, May 18, Moulding.

- Smith, James, & Knowland, G. F., 2367, Sep. 7, Spring [mattresses, &c.]
 Smith, James, & Worsdell, T. W. (Johnson), 1646, [June 22, Spark arresters.]
 Smith, James T. (Shepard), 2125, Aug. 11, Umbrellas.
 — James T. (Clarke), 2126, Aug. 11, Carriage [umbrellas.]
 — James W., 1390, May 24, Fermenting worts.
 — John, 1138, Apr. 28, Ordnance batteries.
 — John, & Hattersley, R. L., 3030, Nov. 9, Looms.
 — John, & Robinson, J., 2953, Nov. 3, Cutting [wood for paper.]
 — John P., 506, Feb. 25, Artizans' tools.
 — John T., 311, Feb. 4, Gunpowder.
 — Joseph, 2863, Oct. 25, Motive-power.
 — Joseph, & Watson, A., 885, Apr. 3, Locks for [purses, bags, &c.]
 — M., 2946, Nov. 2, Casks.
 — N. L. M., 2507, Sep. 22, Water-meter blower [pump, &c.]
 — P., & Donald, J. F., 805, Mar. 24, Finishing fabrics.
 — Richard, 2784, Oct. 19, Artificial manures.
 — Robert, 3514, Dec. 29, Weaving fancy goods.
 — Robert F., 205, Jan. 26, Metallic antimony.
 — Robert G., 76, Jan. 12, Paper-making.
 — Rowland, 345, Feb. 10, Raising the nap of [woollen cloth.]
 — S., 91, Jan. 13, Cleaning chimneys.
 — S., 3090, Nov. 15, Sliding chandeliers & gas lamps.
 — S., & Leach, E., 2373, Sep. 8, Smoke consuming [furnaces.]
 — S. F., & Jaynor, A., 2976, Nov. 4, Night signals.
 — T. J. (Broadwell), 250, Jan. 31, Mitrailleses.
 — T. J. (Broadwell), 380, Feb. 15, Gun carriages.
 — T. J. (Du Motay), 470, Feb. 22, Chlorine.
 — T. J. (Du Motay), 491, Feb. 24, Ammonia.
 — T. J. (Rousselot), 790, Mar. 23, Extracting cane [juice.]
 — T. J. (Fairman), 1013, Apr. 17, Stretching picture [frames, &c.]
 — T. J. (Du Motay), 1725, July 3, Recovering [potash, &c.]
 — T. J. (McCormick), 1726, July 3, Reaping and [mowing.]
 — T. J. (Bourau), 1966, July 27, Combing fibres.
 — T. J. (Deschamps & Oudit), 2015, July 31, [Cutting threads of net, &c.]
 — T. J. (Pinet), 2054, Aug. 3, Motive-power.
 — T. J. (Bean), 2157, Aug. 16, Lighting, &c. gas.
 — T. J. (Du Motay), 2231, Aug. 25, Ammonia.
 — T. J. (Du Motay), 2232, Aug. 25, Chlorine and [hypochlorites.]
 — T. J. (Lengée, Bouttier & Vincent), 2363, Sep. 7, [Clips or shears.]
 — T. J. (Folacci & Lamie), 2395, Sep. 11, Motive- [power.]
 — T. J. (Folacci), 2493, Sep. 21, Waggon, vans, &c.
 — T. J. (Muller), 2676, Oct. 9, Treating fabrics, &c. [for dyeing.]
 — T. J. (Lengée & Bouttier), 2867, Oct. 25, Wheels [and axles.]
 — T. J. (Tiranoff, Tiranoff & Kousakoff), 3164, [Nov. 22, Railways and rolling stock.]
 — T. J. (Le Mat), 3218, Nov. 28, Revolvers, &c.
 — T. J. (Le Mat), 3224, Nov. 29, Rifling fire-arms, &c.
 — T. J. (Broadwell), 3274, Dec. 5, Case for car- [tridges, &c.]
 — W., 2455, Sep. 18, Warming and ventilating.
 — W., & Tetley, S., 1604, June 17, Preventing waste [in combing, &c. fibres.]
 — W. F., & Coventry, A., 1812, July 12, Turning, [&c. metals.]
 Smith, W. Hemsworth, 957, Apr. 11, Handles of pocket [knives.]
 Smith, W. Hugh; Weaver, J. H., & Jones, S. (Lake), [294, Feb. 2, Electro-motors.]
 — W. R., & Cruickshank, G. M. (Lake), 2911, Oct. 30, [Packing.]
 Smith, W. S., 3240, Nov. 30, Steam-engines.
 — W. W., 552, Mar. 2, Anchors.
 Smyth, D. McC., 3166, Nov. 22, Sewing-machines.
 Snell, P., & Tucher, W. (Durant), 262, Jan. 31, Sharpen- [ing saws.]
 Snoeck, A. (Hughes), 920, Apr. 6, Reeling threads or yarns.
 — A. (Hughes), 2581, Sep. 29, Reeling threads or [yarns.]
 Snowden, S. W., & Moffat, J., 525, Feb. 27, Safety-valves.
 Snowdon, J., 97, Jan. 14, Tools for drilling, boring, &c.
 — W., 742, Mar. 20, Treating & applying card board.
 — W., 744, Mar. 20, Cutter blocks for chisels, &c.
 Soares, G. de M., & Rogers, J., 2586, Sep. 30, Asphalt [paving.]
 Solomons, B., 847, Mar. 29, Prismatic compasses.
 Somervell, J., 615, Mar. 8, Artificial leather.
 Somerville, J., & Robinson, J., 3335, Dec. 9, Charging [retorts, &c.]
 Somerville, D. M., & Howe, G. W. (Lake), 1830, July 12, [Knitting-machines.]
 Somzé, M. L., 1622, June 20, Pipe joints.
 Sonstadt, E., 105, Jan. 14, Acetates & carbonates of so- [dium, &c.]
 Soper, W., 2359, Sep. 6, Cartridges.
 Soul, M. A. (Gehrrens), 850, Mar. 30, Clock escapements.
 Soutar, D., 647, Mar. 10, Hackling or dressing jute.
 Southan, T., 1377, May 23, Shoe and clog tips.
 Southwell, H., 2265, Aug. 29, Bobbins.
 Southwood, J., 1316, May 16, Water-closets, privies, &c.
 — W., 998, Apr. 15, Feeding fires with fuel.
 Sowerby, J. G., 2433, Sep. 15, Invalid couches.
 Spagnoletti, C. E., 198, Jan. 25, Signalling & telegraphing.
 Sparrow, A., 1502, June 6, Metallic bale-ties.
 — T. D. T., 1819, July 12, Darning socks, stock- [ings, &c.]
 Spartali, N. D., 2597, Oct. 2, Propelling vessels.
 Spear, J. J., 3286, Dec. 6, Bottle-stoppers.
 — V. K., 762, Mar. 21, Burnishing heels of boots, &c.
 Speight, G., 1011, Apr. 17, Cleaning knives and forks.
 Spénard, T., & Letourneur, C. H. (Haseltine), 476, [Feb. 23, Combined knife and glass-cutter.]
 Spence, D., 1036, Apr. 19, Treating spent oxide of iron.
 — G., Kirkham, T. N., & Ensom, V. F., 645, Mar. 10, [Scouring, bleaching, and dyeing fibres.]
 — J. B., 1135, Apr. 28, Calcining furnaces.
 — J. B., & Dunn, P., 1136, Apr. 28, Manure.
 — J. B., & Dunn, P., 1589, June 15, Phosphates of [alumina, &c.]
 — P., 2832, Oct. 23, Oxide of iron; sulphate and [muriate of iron.]
 — P., 2834, Oct. 23, Alum and manure.
 — W. (Perret, Bros., & Oliver), 1807, July 11, [Roasting pyrites, &c.]
 — W. (Fensom), 3239, Nov. 30, Turning tools.
 Spencer, A., & Richardson, T. & J. W., 1788, July 8, [Revolving puddling furnaces.]
 — G., 993, Apr. 14, Preserving and storing grain, [meal, &c.]
 — G., 3094, Nov. 16, Asphalt paving.
 — J. F., & Inglis, W., 651, Mar. 11, Steam-engines.
 Spencer, R. (Newton), 907, Apr. 5, Pyrometers; furnace [linings.]
 Spencer, S., & Gillman, A. W., 607, Mar. 7, Fining and [preserving beer, &c.]
 Sperati, C. A. (Guattari), 1346, May 19, Ships' signals.
 Sperry, T. S. (Haseltine), 235, Jan. 28, Pillows, bolsters, &c.

- Spencer, F. (Macken)*, 2163, Aug. 16, Spinning.
Spengue, J. (Thorne), 1974, July 27, Drilling machines, &c.
Spratt, W. S., & Giles, A., 1672, June 26, Agricultural [implements].
Spreckles, C. (Moore), 575, Mar. 3, Sugar.
Sprengel, H., 921, Apr. 6, Safety explosives.
 — *H.*, 2642, Oct. 5, Explosive compounds.
Sprual, D., 1638, June 22, Caps for invalids.
Squier, G. La F. & H. C. (Clark), 892, Apr. 4, Sugar- [cane mills].
 — *H. C. & G. La F. (Clark)*, 892, Apr. 4, Sugar- [cane mills].
Stagg, J., 3512, Dec. 29, Lockets.
Stanton, M., & Stockley, J., 2666, Oct. 9, Steam-engines [and boilers].
Staudford, E., & Price, A. P., 61, Jan. 10, Registering games.
Stanley, J. & R., 3291, Dec. 6, Tiles and quarries.
 — *R. & J.*, 3291, Dec. 6, Tiles and quarries.
Stapler, H., 2591, Oct. 2, Filtering mineral oils, &c.
 — *H., & Dean, T.*, 942, Apr. 10, Filtering oils, &c.
 — *H., & Sinclair, J.*, 1203, May 4, Raising beer, &c.
 — *H., & Sinclair, J.*, 2837, Oct. 24, Withdrawing [ale, &c].
Starkie, H., 1192, May 3, Slide-valves.
Starley, J., 121, Jan. 17, Sewing-machines.
 — *J.*, 620, Mar. 8, Sewing-machines.
Starnes, J. S., 266, Feb. 1, Fog-horn.
 — *J. S.*, 1697, June 29, Filtering.
Starr, H. (Wotton), 296, Feb. 3, Buoyant mattress.
 — *R. B.*, 3201, Nov. 27, Turnstiles for omnibuses, &c.
Stauf, W., 2294, Aug. 31, Substitute for horse-hair, &c.
Stausse, V., Ensinger, G. W., Nimmo, A., & Moran T. (Johnson), 2174, Aug. 18, Looms; trans- [mitting motion].
Stayner, A. E., & Hardy, C. A., 2527, Sep. 25, Shafting [picks, &c].
 — *A. E., Harrison, J., & Hardy, C. A.*, 2498, [Sep. 22, Picks, hammers, axes, &c].
Stead, H., 1849, July 14, Stringed musical instruments.
 — *H.*, 2392, Sep. 11, Stringed musical instruments.
Steel, J., & Wilson, H., 975, Apr. 13, Cooling worts.
Steele, J., 2817, Oct. 21, Railway signalling.
 — *R. J.*, 3301, Dec. 7, Varnishes.
Steers, R., & Fryer, D., 2432, Sep. 15, Hand vices, screw- [wrenches, &c].
 — *R., & Fryer, D.*, 2458, Sep. 18, Roughing horses.
Stevens, C. J., & Wallis, A., 698, Mar. 16, Hay and [straw elevators].
 — *C. J., & Wallis, A.*, 1267, May 11, Elevators.
 — *C. J., & Wallis, A.*, 2537, Sep. 26, Heating [feed-water, &c].
Stell, M., 1596, June 16, Spinning, twisting, &c.
Stempf, A. (Mann), 187, Jan. 25, Breech-loading ord- [nance].
Stenger, L., 2183, Aug. 19, Flattening window-glass.
Stenhouse, J., & Duncan, J., 1285, May 6, Sugar.
 — *J., & Duncan, J.*, 1619, June 20, Sugar; [treating saccharine solutions].
Stenman, B. A., & Procopé, M. (Lake), 2851, Oct. 24, [Sewing machines].
Stephen, W., & Collingridge, A. (Johnson), 2261, Aug. 28, [Generating steam].
Stephens, H. H., 2770, Oct. 18, Sulphate of ammonia.
 — *J.*, 1493, June 5, Ventilating; driving machinery.
 — *J.*, 1998, July 28, Ascertaining distances.
 — *R., & Broughton, F.*, 2341, Sep. 5, Breaks for [railways].
Stephenson, J., & Raper, J., 319, Feb. 7, Furnace bars.
Sterne, L. (Almqvist), 2714, Oct. 13, Fluid-meters.
 — *L., & Jaques, J. A.*, 3437, Dec. 19, Bags and [pouches].
Sterry, A. C., 95, Jan. 13, Candles.
Stevens, E., & Marchisio, G. E., 775, Mar. 22, Oils and [paints].
 — *H.*, 2590, Sep. 30, Cataloguing, &c. libraries.
 — *J. J.*, 435, Feb. 18, Railway points.
 — *J. J. F.*, 2713, Oct. 13, Working railway-signals.
Stevenson, G., 2654, Oct. 6, Iron and steel.
 — *J., & Guthrie, A.*, 531, Feb. 27, Motive-power [engines, &c].
 — *J. C., Welsh, J., & Hope, D.*, 2761, Oct. 17, [Purifying air for ventilating].
 — *J. L.*, 2914, Oct. 31, Expanding picket pin.
Stewart, C., & Bond, R., 594, Mar. 6, Loom-templates.
 — *D.*, 3269, Dec. 4, Sugar-cane mills.
 — *L.*, 104, Jan. 14, Wheels for carriages.
 — *L.*, 1333, May 17, Wheels for carriages, &c.
 — *L.*, 2035, Aug. 2, Pens.
 — *R., & Wallace, J.*, 271, Feb. 1, Treating fibres [for paper].
 — *R. W.*, 1470, June 2, Washing yarns.
Stiff, W. C. (Leng), 231, Jan. 28, Bale-ties.
Stiles, E. C., & Eladon, J. F., 500, Feb. 25, Dressing mill [stones].
Still, A. H., & Lane, D., 2655, Oct. 6, Gas.
Stillman, W. J., 3069, Nov. 14, Photographic cameras.
Stocker, A. S., 1149, Apr. 29, Bottles and stoppers.
Stockley, J., & Stainton, M., 2666, Oct. 9, Steam-engines [and boilers].
Stocks, B. & J. S., 830, Mar. 28, Staking and grounding [leather].
Stocks, G. J., & Bennett, A., 1800, July 10, Bells.
Stocks, J. S. & B., 830, Mar. 28, Staking and grounding [leather].
Stockwell, N. P. (Howe Machine Co.), 2030, Aug. 1, [Sewing-machines].
Stodart, J., 1913, July 21, Digging potatoes, &c.
Stokes, J., & Sykes, T. H., 658, Mar. 13, Leasening [smoke in furnaces].
 — *J. H.*, 2624, Oct. 4, Combined pen, pencil, ink, &c.
 — *N.*, 1359, May 20, Carriages.
Stokoe, R., 1971, July 27, School desks and forms.
Stone, J. (Hunt), 2652, Oct. 6, Steam-boilers.
 — *J. (Hunt)*, 3360, Dec. 12, Incubators.
Stoner, J. B., 570, Mar. 3, Dress for saving life in water.
 — *J. B.*, 731, Mar. 18, Floating lighthouse, &c.
Stoney, F. S., 2602, Oct. 3, Tops for umbrellas, sticks, &c.
Storer, J. (Cameron), 1663, June 24, Wheelbarrows and [trucks].
Stott, A. H., 1881, July 19, Fire-proof and other flooring.
Strang, W., 1765, July 6, Looms.
 — *W.*, 2814, Oct. 21, Weaving ornamental fabrics.
Strange E. M. (Newton), 1353, May 19, Hulls of vessels.
Strauss, A., 1810, July 11, Tobacco jars, &c.
Street, W. C., 2376, Sep. 8, Stoppers for bottles, &c.
Stroh, J. M. A., 3293, Dec. 6, Musical instruments.
 — *J. M. A., & Wheatstone, Sir C.*, 2172, Aug. 18, [Electro-magnetic telegraphs].
Struthers, T., & Davis, C., 2256, Aug. 28, Waterproof- [ing, &c].
Sturgeon, T., 2185, Aug. 19, Dressing & furrowing mill [stones].
Sugg, W. T., 2844, Oct. 24, Distributing fluids & liquids.
Suggitt, R., & Court, T. & R., 1254, May 9, Winding [cops, &c].
Suisse, La Société Industrielle (Johnson), 2349, Sep. 6, [Fire-arms].
Sullivan, J., Davis, J., Ilbery, J. A., & Isangk, B., 1680, [June 27, Recording pressure, &c. of gases [and liquids, and speed of machines].
Sumner, W., & Waldenström, E. H., 1944, July 24, Boring.
Swowicz, S. (Box), 3406, Dec. 15, Compressing dust coal.
Sutcliffe, H. & W., 1844, July 14, Syphon pipes or traps.
 — *R.*, 3179, Nov. 23, Utilizing waste heat.

Sutcliffe, W. & H., 1844, July 14, Syphon pipes or traps.
 Sutherland, F. D., 562, Mar. 2, Fastening for umbrella
 [covers].
 — M. A., 640, Mar. 10, Rubber compound for
 [packing, &c].
 Sutton, J. M., & Sherwin, P., 297, Feb. 3, Treating sewage.
 Swain, G., 669, Mar. 14, Joints for lockets, brooches, &c.
 Swan, H., 99, Jan. 14, Wheels; axle bearings.
 — James, 2785, Oct. 19, Augers and bits.
 — John, 795, Mar. 23, Signalling at sea.
 Sweeney, T., 1453, May 31, Fluid-meters.
 Sweet, S. (Childs & Childs), 3510, Dec. 29, Excavating,
 [ditching, &c].
 Sweetser, G. R., 1064, Apr. 22, Aërated liquids, bottle
 [stoppers, &c].
 Swift, J., 1751, July 5, Spinning and doubling.
 Swinburne, T. J., 2808, Oct. 20, Kilns for plate glass.
 Swindells, L., & Kenyon, H., 79, Jan. 12, Acids.
 Sykes, T. H., & Stokes, J., 658, Mar. 13, Lessening smoke
 [in furnaces].
 Symons, W., 2869, Oct. 26, Hulls of ships.
 — W. M. (Dotch), 2923, Oct. 31, Soaps, ointments,
 [washes, &c].

T.

Taber, J. R. (Potter), 3417, Dec. 16, Coupling carriage
 [shafts].
 Taft, G. C., & Armbruster, J. H. (Johnson), 533, Feb. 28,
 [Sand-paper, &c].
 Tagell, J., 2681, Oct. 10, Nut-screwing machine.
 Talcott, C. McK., 2239, Aug. 25, Strengthening button-
 [holes, &c].
 Tall, J., 1001, Apr. 15, Roofs for buildings.
 Tallent, T. E., 1831, July 13, Signalling on railways.
 Tamin, J. M. O., 989, Apr. 14, Increasing power of machines.
 Tamin, J. M. O. (Clark), 2631, Oct. 4, Alimentary
 [preparations].
 Tangye, G., 1449, May 31, Snatch blocks.
 Tankard, J., & Cockcroft, J., 772, Mar. 22, Reeling and
 [winding yarn].
 Tanner, B., 1147, Apr. 28, Superphosphate of lime.
 — B., 1489, June 5, Phosphates of soda, &c.
 — B., 1776, July 7, Superphosphate of lime.
 — B., 2080, Aug. 7, Phosphoric acid & phosphorus.
 — B., 3518, Dec. 30, Phosphates of soda, &c.
 Tannett, J. T., Craven, J., & Fox, S., 1108, Apr. 27,
 [Hoisting cranes].
 Target, F. N., 1847, July 14, Dry closets and commodes.
 Tarr, J. B. (Edwards), 2582, Sep. 29, Condensing metals.
 Tasher, S. P. M., Devlan, P. S., & Wendell, I. P. (Lake),
 [142, Jan. 19, Telegraph cables].
 Tasker, W., 725, Mar. 17, Straw-elevators.
 Tate, C. M., 360, Feb. 13, Asphalt roads and causeways.
 — W., 310, Feb. 4, Raising, &c. gates at pit-mouths.
 Tate, W. J., & Mitchell, H. R. (Hunt), 2504, Sep. 22,
 [Quilting-machines].
 Tatnam, A. & H., 219, Jan. 27, Taking up threads in warp
 [machines].
 — H. & A., 219, Jan. 27, Taking up threads in warp
 [machines].
 — J., 768, Mar. 21, Preparing fibres for spinning.
 — W., 3481, Dec. 23, Carding engines and drawing
 [frames].
 Tatters, W., 412, Feb. 17, Registering apparatus.
 Tavener, W., 1544, June 10, Lowering and raising window
 [sashes].
 Tayler, W. H., 2778, Oct. 18, Gas and air stoves.

Taylor, W. H., 3388, Dec. 14, Drains, traps and closets.
 Taylor, A., & Dendy, J., 2560, Sep. 28, Jacquard apparatus.
 — C., & Charles, J., 1758, July 4, Floor-cloth and
 [leather].
 — E., 1380, May 23, Washing coal slack.
 — E., 1969, July 27, Manure.
 — F., 168, Jan. 23, Paper-fronts.
 — F., 1649, June 23, Spring-mattresses, &c.
 — F. (Schneider), 1288, May 13, Paper collars and
 [fronts].
 — F. B., 3258, Dec. 1, Grappling apparatus.
 — F. B., & Adams, W. M., 355, Feb. 11, Propelling,
 [&c. ships].
 — F. B., & Holmes, J. E., 3427, Dec. 18, Brake;
 [starting carriages].
 Taylor, G. (Newton), 25, Jan. 5, Transmitting motive-
 [power].
 Taylor, James, 406, Feb. 16, Doffing & replacing bobbins.
 Taylor, James (Mills), 1686, June 27, Battery guns.
 Taylor, James, & Cooke, W., 1513, June 8, Balance pistons.
 — James & J., & Clegg, A., 2577, Sep. 29, Looms.
 — John, 3260, Dec. 2, Stoves or fire places.
 — Joseph, & Prest, J., 1759, July 5, Polishing saw
 [blades, &c].
 — N. F., 1747, July 4, Lamps.
 — T. H., 2302, Sep. 1, Sowing seed.
 — W., 3191, Nov. 25, Cut nails and tacks.
 — W. C., 2473, Sep. 20, Safety-valves.
 Teague, A. (Simpson), 1492, June 5, Vices.
 Tebbitt, C., 2645, Oct. 5, Paper damper.
 Tebbutt, J., 3159, Nov. 22, Terry fabrics.
 Telling, W. A., & Johnson, S., 469, Feb. 22, Dry gas-
 [meters].
 Temple, W., 3496, Dec. 27, Stench-traps.
 Templeton, J. F. W., 1592, June 16, Applying names, &c.
 [to stoppers].
 — J. S., 2709, Oct. 13, Weaving.
 Tenwick, J., 626, Mar. 9, Reaping, mowing, &c.
 Tergolina, Count V. Di, 2499, Sep. 22, Horses' 'bits.'
 Ter Meulen, W. H. (Boyd), 263, Feb. 1, Dispersing sand,
 [&c.; probes].
 Terré, A. de & De Mercader, E. (Watteu), 2715, Oct. 13,
 [Explosives].
 Terrell, T., Hogg, W. B. G., & Thomlinson, J., 3116,
 [Nov. 17, Sulphuric acid].
 Tessier, A., 1834, July 13, Obtaining soda from wrack.
 Tessier, G. E. H. H., P. C. & P. H. (Newton), 3115
 [Nov. 17, Manure].
 — P. C., P. H. & G. E. H. H. (Newton), 3115
 [Nov. 17, Manure].
 — P. H., G. E. H. H. & P. C. (Newton), 3115
 [Nov. 17, Manure].
 Tetley, S., & Smith, W., 1604, June 17, Preventing waste
 [in combing, &c., fibres].
 Thiers, W. F. J. (Mills), 1883, July 19, Ventilating ves-
 [sels, &c].
 Thomas, C., 354, Feb. 10, Cleansing fabrics.
 — C. & Price, E., 1424, May, 27, Clipping horses.
 — G., 2048, Aug. 3, Cleaning knives.
 — Jane J. [Executrix of G. Thomas], 2048, Aug. 3,
 [Cleaning knives].
 — John, 473, Feb. 23, Slate ridges for roofs.
 — John, 1024, Apr. 18, Puddling machines.
 — John, 3091, Nov. 15, Fire-arms.
 — John J., & Howson, R., 2881, Oct. 27, Puddling
 [furnaces].
 Thomas, N. H. (Lake), 2875, Oct. 26, Preserving wood.
 Thomas, S., & Guise, W., 538, Feb. 28, Needles; needle-
 [wrappers].
 — S. W., 864, Mar. 31, Bicycles.
 — T., 915, Apr. 6, Ventilating mines.
 — W., 1065, Apr. 22, Buses for stays, &c.

- Thomas, W., 2067, Aug. 5, Tramway cars, &c.
 — W., 3010, Nov. 8, Stays and bodices.
 — W., 3222, Nov. 29, Stays, bodices and busks.
 Thomlinson, John & J., 183, Jan. 24, Railway signals.
 — John, Terrell, T., & Hogg, W. B. G., 3116,
 [Nov. 17, Sulphuric acid.
 — Joseph & J., 183, Jan. 24, Railway signals.
 Thompson, B., 1475, June 2, Folding perambulators.
 — D. B., 600, Mar. 6, Distributing type.
 — H., & Westlake, T., 2187, Aug. 19, Treating
 [fibres.
 Thompson, H. G. (Tongue), 209, Jan. 26, Actuating sew-
 [ing machines.
 — N. (Newton), 1018, Apr. 17, Holding, &c. win-
 [dow blinds.
 — N. (Newton), 1019, Apr. 17, Sash fasteners &
 [locks.
 — N. (Newton), 1104, Apr. 26, Pliers, &c.
 — N. (Newton), 1362, May 20, Hollow ware, &c.
 — N. (Newton), 2880, Oct. 26, Breech-loading
 [ordnance.
 Thompson, T. J., 2278, Aug. 30, Railways and tramways.
 — W., 713, Mar. 17, Cutting marble, stone, &c.
 — W., 2802, Oct. 20, Cutting and moulding mar-
 [ble, &c.
 — W. H., 1270, May 11, Motive-power.
 — W. H., 3039, Nov. 10, Motive-power.
 Thomson, D., & Underwood, R. R., 922, Apr. 6, Iron tubes.
 — D., & Underwood, R. R., 2463, Sep. 19, Spindles
 [used in spinning.
 — J., & Poupard, W., 1530, June 9, Ventilating.
 — J., & Poupard, W., 1609, June 19, Increasing
 [draught in chimneys.
 — R. W., 2409, Sep. 13, Guiding road locomo-
 [tives, &c.
 — R. W., & Head, J., 434, Feb. 18, Road steamers
 [for farming.
 — T., 1982, July 28, Treating and smelting ores, &c.
 — T., 3127, Nov. 18, Smelting, &c. iron of waste
 [slag, &c.
 — Sir W., 252, Jan. 31, Electric telegraphs.
 — Sir W., 810, Mar. 25, Clocks, &c.
 — W., 3369, Dec. 18, Boring or drilling holes.
 — W., & Macredie, A., 886, Apr. 3, Casting ingots
 [for cranked axles, &c.
 Thorne, W. H. (Sprague), 1974, July 27, Drilling ma-
 [chines, &c.
 Thornhill, W., 1158, Apr. 29, Travelling bags, &c.
 Thornton, E., 2306, Sep. 1, Kitchen-ranges.
 — J., 829, Mar. 28, Carding-engines.
 — R., & Wear, B., 831, Mar. 28, Carding-engines.
 Thumm, C. F., & Hill, S. A. (Johnson), 1450, May 31,
 [Heating.
 Tibbitts, A., & Fullwood, E., 1783, July 7, Paving, &c.
 Tickle, R. P., 3490, Dec. 27, Stereotype plates, &c.
 Tidmarsh, S., & Geering, H., 3203, Nov. 27, Joints for
 [bedsteads, &c.
 Tiernan, R., 2724, Oct. 14, Treating tobacco.
 Tilden, H. A., 3085, Nov. 15, Disinfecting and deodorizing.
 Tildesley, M., 1224, May 5, Furnaces, ovens, & kilns.
 — M., 3284, Dec. 6, Annealing cast iron.
 Tinker, F. & Marsden, W., W. H. & G. A., 2323, Sep. 2,
 [Trousers.
 Tinn, J., 2576, Sep. 29, Steam-boilers.
 Tipple, C. H., & Keily, L. A., 1999, July 29, A new game
 [“Jeu de joie.”
 Tiranoff, J. & N. & Kousakoff, A. (Smith), 3164, Nov. 22,
 [Railways and rolling stock.
 — N. & J., & Kousakoff, A. (Smith), 3164, Nov. 22,
 [Railway and rolling stock.
 Tison, W. H. (Dempster), 1922, July 21, Hasps or latches.
 Titley, R., 896, Apr. 4, Louvre blinds.
 Titsink, J., Bolding, J. L. & J. T., 35, Jan. 6, Water-closets
 [and valves.
 Todd, L. J., 1110, Apr. 27, Steam carriages, boilers and
 [wheels.
 Toepler, P., 1052, Apr. 21, Cleaning cotton yarn, &c.
 Tomkins, E., 285, Feb. 2, Warming railway carriages, &c.
 Tommasi, F., 175, Jan. 23, Generating force.
 Tonge, R., & Rushton, T. H., 375, Feb. 15, Spinning.
 Tongue, J. G. (Thompson), 209, Jan. 26, Actuating sewing
 [machines.
 — J. G. (Merrill), 740, Mar. 18, Textile fabrics.
 — J. G. (Fouque), 1180, May 2, Cartridges.
 — J. G. (De Laharpe & Fouché), 2006, July 31,
 [Steam-boilers.
 — J. G. (Merrill), 2568, Sep. 29, Fire-arms.
 — J. G. (Meynier), 3126, Nov. 18, Variegated fa-
 [brics.
 — W., 236, Jan. 28, Musical instruments.
 — W. T., 1478, June 3, Destroying vermin by steam.
 Tonkinson, J., 1281, May 12, Fastenings for purses, &c.
 Tooth, W. H., 2454, Sep. 18, Cartridges.
 — W. H., 2965, Nov. 4, Fire-arms.
 Torrance, J. & T., 1833, July 13, Paper-pulp.
 — T. & J., 1833, July 13, Paper-pulp.
 Tossell, M., 2661, Oct. 7, Ventilating.
 Tottenham, H. L. A., 946, Apr. 10, Weapon for entrench-
 [ing, &c.
 Touaillon, C. (André & Fleury), 3199, Nov. 25, Cast iron
 [bars.
 — C. (Vigier), 3328, Dec. 9, Preventing incrus-
 [tation.
 Tower, F. M. (Tower), 2956, Nov. 3, Hand-stamp.
 Tower, J. J. (Clark), 671, Mar. 14, Hand-cuffs & shackles.
 — J. M. (Tower), 2956, Nov. 3, Hand-stamp.
 Towle, H. E. (Babcock), 1418, May 27, Steam-engines.
 — H. E. & Poole, J. M., 877, Apr. 1, Producing true
 [surfaces on rollers, &c.
 Townsend, A. H. (Clark) 1428, May 27, Battery guns.
 Townsend, C., & Rollason, A., 2972, Nov. 4, Waterproof-
 [ing, &c. fabrics.
 — H. E. (Goddu), 1079, Apr. 24, Nailing shoes, &c.
 — J., 995, Apr. 14, Treating phosphates.
 — J., 1843, July 14, Lubricating oils.
 — J., 2267, Aug. 29, Treating phosphates, &c.
 — S., 1996, July 29, Cleaning boots, shoes,
 [knives, &c.
 Toy Co. National (Newton), 2942, Nov. 2, Automatic doll.
 Tranter, W., 2509, Sep. 23, Fire-arms.
 Trawniczek, J. (Lake), 2865, Oct. 25, Feeding guns.
 Tregay, W., 905, Apr. 5, Stamping & crushing ores, &c.
 Trevithick, F. H., 1575, June 14, Excavating land.
 — F. H., 2977, Nov. 6, Locomotive and traction
 [engines, and vehicles.
 Tribe, J., 1171, May 2, Pouches, purses, bags, &c.
 Tronchon, A. P., 3016, Nov. 8, Counters for cabs, &c.
 Trossin, O., 2680, Oct. 10, Motive-power.
 Trotman, S., 3209, Nov. 28, Regulating steam-engines, &c.
 Trotter, J. (Gedge), 446, Feb. 21, Extracting tin.
 Trudeau, T. (Lake), 1207, May 4, Glass tubes or globes.
 Truscott, T., 1172, May 2, Air pumps for divers.
 Truswell, J. & W., 535, Feb. 28, Heating air for warming.
 — W. & J., 535, Feb. 28, Heating air for warming.
 Tubbs, H. T., 1463, June 1, Cases for pins, buttons, &c.
 Tucker, W., & Snell, P. (Durant), 262, Jan. 31, Sharpen-
 [ing saws.
 Tuer, Mark & M., & Holden, J., 652, Mar. 11, Looms.
 — Matthew & M., & Holden, J., 652, Mar. 11, Looms.
 Tullis, J., 485, Feb. 23, Tubes used in spinning fibres, &c.
 — J. K. & J. T., 2974, Nov. 4, Finishing belts.
 — J. T. & J. K., 2974, Nov. 4, Finishing belts.
 Tunstill, R. & T., & Armistead, H., 2021, Aug. 1, Buffer
 [for easing shuttle, &c. in looms.

Tunstall, T., Bannister, T., & Armistead, H., 439, Feb. 18, [Looms.
 — T. & R., & Armistead, H., 2021, Aug. 1, Buffer
 [for easing shuttle, &c. in looms.
 Turnbull, G. V., Salvesen, C., Irvine, R., MacLagan, R. C.,
 [& Fleming, A. B., 1451, May 31, Lubricants
 [for wool.
 — R., 155, Jan. 21, Pontoons.
 — R., 1878, July 18, Floating docks, &c.
 Turner, A., 1209, May 4, Terry or carpet fabrics.
 — B., 2085, Aug. 8, Spring hinges for doors.
 — G., 1367, May 22, Tents and camp equipage.
 — H., 2572, Sep. 29, Ceilings, cornices, and walls.
 — J., R. & S., 1556, June 12, Packing for stuffing-
 [boxes, &c.
 — J. A., 630, Mar. 9, Packing material.
 — J. J., 2843, Oct. 24, Railway & tramway wheels.
 — R., 579, Mar. 4, Preparing and spinning fibres.
 — R., S. & J., 1556, June 12, Packing for stuffing-
 [boxes, &c.
 — S., J. & R., 1556, June 12, Packing for stuffing-
 [boxes, &c.
 — T., 295, Feb. 3, Boots and shoes.
 — W. J., & Waddington, A., 1581, June 15, Singe-
 [ing and cropping fabrics.
 Turney, J., 1351, May 19, Scudding skins.
 — J., 1980, July 27, Scudding skins.
 — J., 3310, Dec. 7, Treating skins and hides.
 Turnock, J., 1480, June 3, Attenuators.
 Turnpenny, W., Atkinson, M., & Davy, T., 2996, Nov. 7,
 [Looms.
 Turen, J. (Gedge), 2891, Oct. 28, Fire-arms.
 Turrell, H. S., & Gardner, F. A. (Benson), 332, Feb. 8,
 [Casters.
 Turtton, C., & Castle, J., 3125, Nov. 18, Sickles.
 Tassand, F. C. & J. R., 1545, June 10, Separating, &c.
 [hair from skins.
 — J. R. & F. C., 1545, June 10, Separating, &c.
 [hair from skins.
 Tweddell, R. H., 3358, Dec. 12, Rivetting or punching
 [metal.
 Tweedale, E., 3272, Dec. 5, Slubbing and roving frames;
 [throftles.
 Tweeddale, G., Marquis of, 1340, May 18, Fire-arms.
 Tweedy, G., 432, Feb. 18, Railway chairs.
 Twining, A. C. (Hughes), 3474, Dec. 32, Ice-making.
 Tylor, A., 685, Mar. 15, Regulating discharge of liquids.
 — A., 1411, May 26, Liquid-meters.
 — A., 2948, Nov. 3, Lavatories; controlling water
 [supply, &c.
 — A., 3339, Dec. 11, Working and ventilating mines,
 [sewers, &c., and irrigating, &c.
 Tyrrell, E. (Clark), 2161, Aug. 16, Labelling boxes.
 Tysall, J. E., 308, Feb. 4, Inlaying wood.
 Tysoc, C., 1039, Apr. 20, Gassing yarns or threads.

U.

Ujkely, H., & Beirle, C. (White), 2364, Sep. 7, Candles,
 [&c.
 Ullithorne, O. A., 591, Mar. 4, Invalid carriages.
 Underwood, N. C., & Adshead, W., 2561, Sep. 28, Felting
 [hat-bodies, &c.
 — R. R., & Thomson, D., 922, Apr. 6, Iron tubes.
 — R. R., & Thomson, D., 2463, Sep. 19, Spindles
 [used in spinning.
 Unsworth, T., 1088, Apr. 25, Banding, cord, &c.
 — T., 3316, Dec. 8, Spinning.

Unsworth, T., & Whalley, E., 2077, Aug. 7, Winding
 [frame.
 Unwin, J., 1626, June 21, Coating metals with nickel.
 — J., 3459, Dec. 21, Coating metals with nickel.
 — J., & Walkland, J., 241, Jan. 30, Self-acting
 [fountain.
 — W., 405, Feb. 16, Break for vehicles.
 Uphill, T. B., 2041, Aug. 2, Joints for metallic furniture.
 Upton, J., 2102, Aug. 10, Horse-shoes.
 Urquhart, W. W., Lindsay, J., & Bell, T., 306, Feb. 4,
 [Power-loom.
 Usera, G. de, & Goujet, A., 2258, Aug. 28, Furnace grates.
 Utley, M. H., & Ross, A. (Lake), 2238, Aug. 25, Electro-
 [magnetic motors.

V.

Vagnolini, R., 2336, Sep. 5, Signalling, &c.
 Valentin, W. G., 1837, July 13, Peroxidation of manganese.
 Valentine, M. S. (Mills), 956, Apr. 11, Preparing meat
 [juices, &c.
 Vallon, J. C. G. du, 1951, July 25, Punches.
 Van Blarcom, A. L., & Hall, T. S. (Lake), 2150, Aug. 15,
 [Signalling.
 Van Choate, S. F., 394, Feb. 16, Fire-arms.
 Vandemark, A. B., & Scharf, S. R. (Lake), 2554, Sep. 28,
 [Artificial asphalt.
 Van Rensselaer, R. A. (Newton), 2598, Oct. 2, Sad-irons.
 Vansteenkiste, A., & Barbe, J., 1401, May 24, Steam-
 [boilers.
 Van Wagner, P. S. (Macfarlane), 3243, Nov. 30, Scat-
 [tering powders on trees, &c.
 Varley, F. H., & T., 2596, Oct. 2, Telegraphs, &c.
 — J. & S. W., 2386, Sep. 9, Cleaning and separating
 [waste fibres.
 — S. A., 131, Jan. 18, Telegraphs; lightning pro-
 [tectors, &c.
 — S. A., 1150, Apr. 29, Telegraphs, &c.
 — S. W. & J., 2386, Sep. 9, Cleaning and separating
 [waste fibres.
 — T. & F. H., 2596, Oct. 2, Telegraphs, &c.
 Vassard, A. P., 1211, May 4, Treating liquid sewage, &c.
 — A. P., 2926, Nov. 1, Treating liquid sewage, &c.
 Vaudoit, T. H. J., 3250, Dec. 1, Cigarette former.
 Vaughan, E. P. H. (Lennig), 2269, Aug. 29, Stannate of
 [soda, &c.
 — H., 1876, July 18, Self-acting escape valves.
 Vauréal, C. J. F. R. de J. de (Henry), 2413, Sep. 13,
 [Desilvering lead.
 Vazquez, A., & Rosenberg, J. E., 3387, Dec. 14, Preserving
 [meat, &c.
 Veauvy, M. (Gedge), 1634, June 21, Railways.
 Veillet, A., & Verny, C., 2441, Sep. 16, Railway signals.
 Vericchio, D., 3356, Dec. 12, Palliasses and mattresses.
 Verity, B. & W., 3341, Dec. 11, Tubular boilers.
 — B. & W., 3342, Dec. 11, Fire-clay gas-burners.
 — E. & J. M., 2339, Sep. 5, Attaching knobs to spindles.
 — J., 2511, Sep. 23, Gas-burners, lamps, reflectors, &c.
 — J. M. & E., 2339, Sep. 5, Attaching knobs to spindles.
 — W. & B., 3341, Dec. 11, Tubular boilers.
 — W. & B., 3342, Dec. 11, Fire-clay gas-burners.
 Vernon, H. A., 2653, Oct. 6, Moving heavy guns.
 Verny, C., & Veillet, A., 2441, Sep. 16, Railway signals.
 Versmann, F., & Fenner, H. J., 3486, Dec. 23, Anthracene.
 Verster, A. J. G. (Perry), 1685, June 27, Letters, figures, &c.
 Vickers, E. C., 3371, Dec. 13, Leather from cotton pulp.
 Videky, A. (Mayrargues), 1469, June 2, Treating excreta.
 Viger, L. la Brèche- (Lake), 3246, Nov. 30, Steel.

Vigier, P. V. (Touaillon), 3328, Dec. 9, Preventing [incrustation].
Vignon, F., 3040, Nov. 10, Furnace fire-bars.
Vigreux, C. (Gedge), 2502, Sep. 22, Cleaning grain.
Vincent, C., Lengée, A., & Bouttier, L. (Smith), 2363, [Sep. 7, Clips or shears].
Virollet, A. (Duché), 1988, July 28, Water-feeding boilers.
Vivien, G. A. & P. C., 2823, Oct. 23, Preserving wood, &c.
 — *P. C. & G. A.*, 2823, Oct. 23, Preserving wood, &c.
Vogan, J., 37, Jan. 7, Preventing explosions in boilers.
Voice, N., 3444, Dec. 20, Ringing bells.
Voigt, E., & Von Conring, A. (Gedge), 566, Mar. 3, [Ostrich feathers, &c].
Vojacek, L., 3334, Dec. 9, Measuring and indicating speed.
Von Bolzano, T., 1349, May 19, Grates for coal dust.
Von Conring, A., & Voigt, E. (Gedge), 566, Mar. 3, Ostrich [feathers, &c].
Von Levetzow, F. C. A., 931, Apr. 8, Flower-pots.
Von Martini, F., 1144, Apr. 28, Fire-arms.
Von Martini, F. (Prioleau), 2925, Oct. 31, Fire-arms.
Vosper, H., 642, Mar. 10, Steam-engines.

W.

Wacha, T. (Wise), 483, Feb. 23, Breech-loading ordnance.
Waddington, A., & Turner, W. J., 1581, June 15, Singe- [ing and cropping fabrics].
Wade, J. A., & Cherry, J., 74, Jan. 12, Tiles.
Wagner, P. S. Van (Macfarlane), 3243, Nov. 30, Scatter- [ing powders on trees, &c].
Wagstaff, T. H. (Newton), 2937, Nov. 1, Raising water.
Walbrook, W. O., 3206, Nov. 27, Quoins for locking up type.
Walker, W., 1632, June 21, Transmitting sounds & signals.
Waldenström, E. H., & Sumner, W., 1944, July 24, Boring.
Wales, E. L., & Prusha, W. F. (Lake), 1073, Apr. 22, [Boots and shoes].
Walker, D., & Robinson, L., 798, Mar. 24, Bale stillages.
 — *G.*, 2621, Oct. 4, Cloth for nail bags, &c.
 — *H.*, 170, Jan. 23, Card clothing of carding engines.
 — *H.*, 2344, Sep. 5, Fire-arms.
 — *H. (Powell)*, 2648, Oct. 5, Cutting button-holes.
 — *John*, 1823, July 12, Attaching knobs to spindles.
 — *Joseph*, 1151, Apr. 29, Calico printers' blankets.
 — *Joseph*, 1413, May 26, Floor-cloth.
 — *T.*, 2674, Oct. 9, Printing machines.
 — *W.*, 298, Feb. 3, Steam-pumps.
 — *W.*, 1368, May 22, Steam-pumps.
 — *W.*, 1571, June 14, Preventing overwinding in [mines].
 — *W.*, 1818, July 12, Coverings for hay ricks, &c.
 — *W., & Banks, J.*, 2495, Sep. 22, Treating sewage, [filtering water, &c].
 — *W. T.*, 1735, July 4, Purifying gas.
 — *W. T.*, 2606, Oct. 3, Cleansing and purifying gas.
Walkington, R., 3053, Nov. 11, Ruling paper.
 — *W.*, 1274, May 11, Metal-planing machines.
Walkland, J., & Unwin, J., 241, Jan. 30, Self-acting [fountain].
Wall, C., 2526, Sep. 25, Air-tight sanitary vessel.
 — *J.*, 1824, July 12, Shirt studs, &c.; knobs, handles, &c.
Wallace, J., 1190, May 3, Reaping and mowing.
 — *J., & Stewart, R.*, 271, Feb. 1, Treating fibres [for paper].
Wallace, W. W., & Giles, A., 1673, June 26, Horse-rakes.
Wallen, T., 1197, May 3, Shearing and clipping.
Waller, E. A., 770, Mar. 22, Railway carriages.
 — *T.*, 2593, Oct. 2, Supplying air to buildings.
Wallis, A., & Steevens, C. J., 698, Mar. 16, Hay and straw [elevators].

Wallis, A., & Steevens, C. J., 1267, May 11, Elevators.
 — *A., & Steevens, C. J.*, 2537, Sep. 26, Heating feed- [water, &c].
 — *S. J.*, 3318, Dec. 8, Drop-down guns & cartridges.
Walsh, J. E. (Clark), 1271, May 11, Cofferdams.
Walsh, T. H., 553, Mar. 2, Signals and alarms.
 — *W., & Allibon, G.*, 693, Mar. 15, Telegraph [poles and posts].
Walton, F., 199, Jan. 25, Block-printing.
 — *T., & Harvey, H. C.*, 265, Feb. 1, Locks and [latches].
Wanklyn, J. A., 3436, Dec. 19, Ammonia salts.
 — *J. A., & Eassie, W.*, 1801, July 10, Preserving [milk].
Wanner, J. F., 2833, Oct. 23, Ornamenting garments and [fabrics].
Ward, D. (Sargeant), 1060, Apr. 22, Sheep shears, &c.
Warden, W. G. (Johnson), 1387, May 23, Tran- [sporting liquids in bulk].
 — *W. G. (Johnson)*, 1578, June 14, Ships.
Wardwell, S. W. (Lake), 3343, Dec. 11, Sewing- [machine tables].
Waring, J. B., 3368, Dec. 13, Water-closet pans.
Warner, A., 3386, Dec. 14, Iron and steel.
 — *R., & Brooke, J.*, 1919, July 21, Pumps.
Warren, T. T. P. B., 537, Feb. 28, Treating india- [rubber, &c].
Warrington, T. A. (Louis), 3315, Dec. 8, Lights for [smokers].
 — *T. A., & Minton, A.*, 1080, Apr. 24, [Clothes brushes].
Warry, R., 2316, Sep. 2, Portable cooking apparatus.
Warsop, G., 150, Jan. 20, Steam and air engines.
 — *G.*, 1247, May 9, Pipe wrenches.
 — *G.*, 1972, July 27, Perambulators, &c.
Warth, A., & Jobbins, W. F. (Lake), 293, Feb. 2, [Cutting cloth, &c].
Warwick, R. H., 163, Jan. 21, Hot-water supply apparatus.
Washburn, W. (Brady, Dresser, & Harris), 2788, [Oct. 19, Coupling].
Washer, F. J. J., & Sloper, B. G., 329, Feb. 8, Treating [sewage].
Wass, G., 3370, Dec. 13, Boots and shoes.
Waters, C. (Lake), 2607, Oct. 3, Governors.
Waterson, J. P., 174, Jan. 23, Hot-water apparatus.
Watkin, A. M., 2029, Aug. 1, Relieving slide valves [from pressure].
Watkins, W. B. (Haseltine), 373, Feb. 14, Telegraphs; [fire-alarms].
Watson, A., & Smith, J., 885, Apr. 3, Locks for purses, [bags, &c].
 — *D. M., & Douglas, C.*, 2158, Aug. 16, Treating [stone, wood, &c].
 — *G., & Andrews, H.*, 2223, Aug. 24, Safety-valves.
 — *H.*, 2570, Sep. 29, Strainer plates for paper- [making].
 — *H., Erek, J., & Found, G.*, 2312, Sep. 2, Motive- [power].
 — *W. R.*, 1606, June 17, Sugar-cane mills.
Watt, J., 3011, Nov. 8, Water-tube steam-boilers.
Watteau, J. (Shaw), 2798, Oct. 20, Treating hides and [skins].
 — *J. (Shaw)*, 3288, Dec. 6, Treating hides and [skins].
 — *J. (Shaw)*, 3477, Dec. 22, Treating hides and [skins].
Watteu, E. (De Terré, & De Mercader), 2715, Oct. 13, [Explosives].
 — *E. (Francois, & Dubois)*, 3004, Nov. 8, Driving [holes in rocks].
 — *E. (Duterne)*, 3168, Nov. 23, Stuffing boxes.
Way, J. T., 1851, July 14, Soluble phosphate of lime.

- Way, J. T., 2028, Aug. 1, Phosphates of soda & potash.
 Wear, B., & Thornton, R., 831, Mar. 28, Carding-
 [engines.
 Weatherill, H., Cockshoot, J., & Wrigley, T., 179,
 [Jan. 24, Railway carriages.
 Weaver, H. B. (Simonds), 1563, June 13, Governors.
 — J. H., Jones, S., & Smith, W. H. (Lake), 294,
 [Feb. 2, Electro-motors.
 Webb, F., & Courtice, J. L., 819, Mar. 27, American-
 [organs.
 — F. W., 2884, Oct. 27, Railway-engines & breaks.
 — F. W., 2985, Nov. 6, Steam-boiler injectors.
 — F. W., 3442, Dec. 20, Engines, boilers & carriages.
 — G., 2420, Sep. 14, Excavating below water.
 — H. B., 3212, Nov. 28, Cleaning cotton-seeds, &c.
 — T., 1667, June 24, Creel frames.
 — T. G., 818, Mar. 27, Street lamps.
 — T. G., 832, Mar. 28, Windows for warehouses, &c.
 — T. G., 3329, Dec. 9, Glasses for signal-lamps.
 — W., 2263, Aug. 21, Pipe-joints, &c.
 Webber, C. E., 200, Jan. 25, Forcing air or gas.
 — J. H., 2250, Aug. 28, Chimney flues.
 Webster, J., 2810, Oct. 21, Lead paint.
 Webster, J. J., & Hall, J. H. (Lake), 3349, Dec. 11,
 [Disintegrating, &c.
 Weiler, C. (Lake), 246, Jan. 30, Combs for worsted
 [machinery.
 Weinrich, L., & Schröder, J. (Hughes), 1185, May 3,
 [Sugar.
 Weir, G., & Weir, J., 1936, July 22, Steam-engines.
 Weir, J., 3096, Nov. 16, Steam-engines.
 — J., & Weir, G., 1936, July 22, Steam-engines.
 Welch, A., 2303, Sep. 1, Cattle-trucks.
 Welch, E. B., & Anders, G. L. (Hunt), 2435, Sep. 15,
 [Telegraphs.
 Welch, E. J. C., 3, Jan. 2, Electric indicators.
 — E. J. C., 776, Mar. 22, Generating electricity.
 — E. J. C., 840, Mar. 29, Steam-engines.
 — E. J. C., 1169, May 2, Link-motion for steam-
 [engines.
 — E. J. C., 1423, May 27, Steam-boiler injectors.
 — J., & Laight, C., 290, Feb. 2, Needle cases, &c.
 — J., & Laight, C., 1287, May 12, Needle cases, &c.
 Weldon, F., 1184, May 3, Presses.
 — W., 2008, July 31, Sulphur, soda and potash.
 — W., 2169, Aug. 18, Recovering sulphur in
 [making soda, &c.
 — W., 2170, Aug. 18, Chlorine.
 — W., 2389, Sep. 11, Chlorates of potash, &c.
 — W., 2963, Nov. 4, Drying chlorine gas.
 Wells, C. S., (Hughes), 608, Mar. 7, Boxes, cartridge
 [cases, &c.
 Wells, G., & Silk, E., 1452, May 31, Charcoal box irons.
 Wells, G. M. (Johnson), 949, Apr. 11, Button-holes.
 Wells, H., 3008, Nov. 8, Railways and sleepers.
 Welsh, J., Hope, D., & Stevenson, J. C., 2761, Oct. 17,
 [Purifying air for ventilating.
 Wendell, I. P., Tasker, S. P. M., & Devlan, P. S.
 [(Lake), 142, Jan. 19, Telegraph cables.
 Wenderoth, F. A., 2909, Oct. 30, Photographic pictures.
 Wérotte, V., 1902, July 20, Evaporating.
 West, H. J., 835, Mar. 29, Bushes for casks, &c.
 — T., 448, Feb. 21, Dish-covers.
 Westerman, J. A., (Johnson), 3423, Dec. 18, Steam-gene-
 [rators.
 Western, C. R., 616, Mar. 8, Boxes for matches, &c.
 Westerton, W. C., 861, Mar. 31, Disinfecting fluids.
 Westinghouse, G., 2436, Sep. 15, Working railway brakes.
 — G., 2592, Oct. 2, Motive-power.
 — G., 2684, Oct. 10, Railway brakes.
 Westlake, T., & Thompson, H., 2187, Aug. 19, Treating
 [fibres.
 Westo, W. H., & Pinder, M., 2428, Sep. 15, Waste pipes
 [for cisterns.
 Weston, G., 2069, Aug. 5, Cutting boot laces or strips.
 — J., Rogers, D., & Monington, J., 1106, Apr. 27,
 [Pianos.
 Wethered, E. R., 2235, Aug. 25, Hammocks.
 Wetmore, W. S., 100, Jan. 14, Protecting troops under
 [fire, &c.
 Weyl, A., 2005, July 31, Damping rollers for paper, &c.
 Whalley, E., & Unsworth, T., 2077, Aug. 7, Winding
 [frame.
 Wheaton, W., & Besley, H., 722, Mar. 17, Distributing
 [manure, &c.
 Wheatstone, Sir C., & Stroh, J. M. A., 2172, Aug. 18,
 [Electro-magnetic telegraphs.
 Wheble, R., 1398, May 24, Hats.
 — R., 2704, Oct. 12, Skates.
 Wheeldon, F. R., 555, Mar. 2, Wheels and pinions.
 Wheeler, E. (Johnson), 388, Feb. 15, Bars, rails, tubes, &c.
 Whewell, G., & Heywood, G., 2993, Nov. 7, Steam-boilers
 [and furnaces.
 Whieldon, W., & Hays, W. B., & J. J., 2100, Aug. 10,
 [Peat; peat-charcoal.
 Whight, G. (O'Dell), 2190, Aug. 19, Hand-clamps.
 Whipple, H. O. (Bousfield), 587, Mar. 4, Lamp wicks.
 Whitaker, J., Lupton, B., & Catlow, C., 631, Mar. 9,
 [Washing clothes.
 — S., 1485, June 5, Taps or cocks.
 White, C., & J. H., 2148, Aug. 15, Attaching buttons to
 [boots, &c.
 — F., & Silber, A. M., 2007, July 31, Lighting
 [apparatus.
 — F., & Silber, A. M., 3254, Dec. 1, Heating, cooking
 [and lighting.
 — G. (Baudelot), 1648, June 23, Producing designs
 [on metal plates.
 — G. (Beurle & Ujhely), 2364, Sep. 7, Candles, &c.
 — G. (Delsarte), 2562, Sep. 28, Pendulum or balance
 [weight levels.
 — H., 264, Feb. 1, Glazing, colouring & preparing skins.
 — James H. & C., 2148, Aug. 15, Attaching buttons
 [to boots, &c.
 — John, 2540, Sep. 26, Consuming smoke.
 — Joseph, 129, Jan. 18, Oilers and oil cans.
 — W., 1188, May 3, Knapsacks.
 — W., & Larkin, H., 23, Jan. 5, Sodium & potassium.
 — W., & Larkin, H., 3311, Dec. 7, Reducing chlorides.
 — W., Larkin, H., & Leighton, A., 1357, May 20,
 [Bleaching powder.
 — W., Larkin, H., & Leighton, A., 1518, June 8,
 [Iron and steel.
 Whitehead, H. W., & Ackroyd, R., 213, Jan. 26, Combing
 [fibres.
 — Joseph, & Foster, W., 3410, Dec. 16, Hy-
 [draulic mains.
 — Julius, 3362, Dec. 12, Moulding sanitary pipes.
 — P. O., 1113, Apr. 27, Bleaching, &c. yarn.
 — T., 195, Jan. 25, Combing fibres.
 — T., 196, Jan. 25, Treating china grass.
 — T., 480, Feb. 23, Combing fibres.
 — T., 2042, Aug. 2, Spinning.
 Whitehouse, E. O. W., 1998, July 29, Electric telegraphs.
 Whitelaw, W. R., 2840, Oct. 24, Furnaces.
 Whiteley, J. B., & Harling, G., 243, Jan. 30, Looms.
 Whitham, T., & Witham, F. A., 816, Mar. 27, Winding-
 [frames.
 — T., & Witham, F. A., 1629, June 21, Winding-
 [frames.
 Whiting, J., 888, Apr. 3, Hoes.
 Whitney, E. (Hughes), 350, Feb. 10, Fire-arms.
 Whittaker, H., & Bradbury, W., 976, Apr. 13, Stillages
 [for presses.

- Whittaker, J., 1296, May 13, Untapped nuts.
 Whitwell, T., 1797, July 8, Valves.
 Whitworth, C. F., 1438, May 30, Fastening gates & doors.
 — Sir J., 2149, Aug. 15, Ordnance.
 — S., 1997, July 29, Shuttles for looms.
 Wiborg, J., 3505, Dec. 28, Air accumulator for furnaces.
 Wickes, W. W. (Clark), 2700, Oct. 11, Iron and steel;
 [welding].
 Wicks, F., 1177, May 2, Beds, cots and couches.
 Widdowson, T., 316, Feb. 7, Umbrellas and parasols.
 Widgery, J., 3149, Nov. 21, Metal cans, cases and boxes.
 Widmark, H. W., 2093, Aug. 9, Waste water valves of
 [cylinders].
 Wiegand, S. L. (Lake), 2793, Oct. 19, Pistons and slide-
 [valves].
 Wier, M. A., 2585, Sep. 30, Signalling.
 — M. A., 3210, Nov. 28, Fixing buttons and studs on
 [garments, &c].
 Wigg, C., 720, Mar. 17, Alkali.
 — C., 1366, May 20, Separating silver and gold.
 Wigham, J. R., 729, Mar. 18, Illuminating lighthouses, &c.
 — J. R., 3326, Dec. 9, Fog-signals, &c.
 Wightman, G., 3487, Dec. 23, Pumps & hydraulic engines.
 Wilcocks, N. G., Cotterell, J. F., & Prudencio, F., 2945,
 [Nov. 2, Bottling aerated liquids; stoppers].
 Wild, J., & Blunn, W., 1504, June 7, Fire-grates and
 [furnaces].
 Wilde, H., 1511, June 8, Boiler tubes.
 — John, and Sinclair, H., 2442, Sep. 16, Level and
 [angle indicators].
 — Joseph, 3509, Dec. 29, Stoving felt-hats.
 — W., & Wood, J. R., 1987, July 28, Joints or hinges.
 Wilders, J. M., 3145, Nov. 21, Feeding thrashing machines.
 Wildman, L. P. (Newton), 1002, Apr. 15, Stringed in-
 [struments].
 Wiley, W. E., 3300, Dec. 7, Pencil-cases and pen-holders.
 Wilke, H., & Esplen, W., 342, Feb. 9, Safety-valves.
 Wilkerson, H., 1869, July 18, Fastening & tipping waggons.
 — S., 3137, Nov. 20, Raising, shooting, &c. sacks.
 Wilkes, J., 586, Mar. 4, Wheels and axles for pit tubs and
 [waggons].
 — S., 202, Jan. 26, Spindles and knobs.
 Wilkins, M. P., Harvey, H. A., & Rogers, C. D. (New-
 [ton]), 2501, Sep. 22, Brushes.
 Wilkinson, F., 868, Mar. 31, Applying tubes to spindles.
 — F., 1874, July 18, Treating cotton for spinning.
 — F., 3000, Nov. 7, Treating wool and woollen
 [fabrics].
 — J., 499, Feb. 24, Grinding, &c. saws, &c.
 — J., 3412, Dec. 16, Pile fabrics.
 Wilks, D., 2841, Oct. 24, Treating animal refuse, &c. for
 [manure].
 Willan, R., Lewis, D., & Briggs, J., 914, Apr. 6, Warping
 [and beaming].
 Willatt, H., Gee, R., & Goss, J., 573, Mar. 3, Knitted fabrics.
 Willcox, C. H., & Carleton, C. (Willcox), 1744, July 4,
 [Sewing-machines].
 Willcox, J. (Willcox & Carleton), 1744, July 4, Sewing-
 [machines].
 Williams, A. D., & Maedermott, M., 468, Feb. 22, Boring
 [rock, &c].
 — A. H., 3154, Nov. 21, Portmanteaus, &c.
 — H., 2728, Oct. 14, Tents and weather protectors.
 Williams, H. M. & S. M., & Douglass, D. A. (Clark),
 [2414, Sep. 14, Spinning].
 Williams, J., 2787, Oct. 19, Medicated steam and vapour
 [baths].
 — J. A. B., 2859, Nov. 3, Moulding artificial fuel, &c.
 — R. P., 1392, May 24, Railways.
 — R. P., & Price, J., 2703, Oct. 12, Railways.
 Williams, S. M. & H. M., & Douglass, D. A. (Clark),
 [2414, Sep. 14, Spinning].
 Williams, T., 3519, Dec. 30, Quarry presses.
 — W., 133, Jan. 19, Cutting coal, &c.
 — W., 2186, Aug. 19, Receptacles for town refuse.
 — W. H., 2649, Oct. 5, Moustache protector for cups.
 Williamson, E. & J., & Shield, J. C., 2192, Aug. 21, Looms.
 — J. & E., & Shield, J. C., 2192, Aug. 21, Looms.
 — J., & Glazier, W., 2497, Sep. 22, Dry-closets, &c.
 Willison, R., 3026, Nov. 9, Heating, &c. liquids; condens-
 [ing steam].
 Willoughby, James, W., J. & S., 16, Jan. 4, Stamping ores.
 — Joseph & S., 3132, Nov. 20, Seed drills and
 [manure distributors].
 — Joseph, S., J. & W., 16, Jan. 4, Stamping ores.
 — S. & J., 3132, Nov. 20, Seed drills and manure
 [distributors].
 — S., J., W. & J., 16, Jan. 4, Stamping ores.
 — W., J., S. & J., 16, Jan. 4, Stamping ores.
 Willsher, J. C., 3429, Dec. 18, Thrashing machines.
 Willson, F. M. (Benson), 1446, May 31, Sewing-machines.
 Willson, T. A., 1772, July 6, Colored lenses.
 Wilshaw, J., & Davis, R., 1175, May 2, Mangles.
 Wilson, A., & Wood, G. B., 2478, Sep. 20, Bessemer steel.
 — Charles, 991, Apr. 14, Railway cattle-trucks.
 — Charles, 1950, July 25, Railway cattle-trucks.
 — Charles G., 1625, June 21, Cotton-presses.
 — Christopher (Wilson & Hunter), 1912, July 21,
 [Stop-motion].
 — G., 3067, Nov. 14, Producing force for mechanical
 [work, &c].
 — G., & English, T., 1465, June 1, Bending armour
 [plates].
 — G. C. (Berdan), 1425, May 27, Cartridges.
 — G. C. (Berdan), 1718, July 3, Cartridge cases.
 — G. C. (Berdan), 2244, Aug. 26, Fire-arms.
 — G. M., 2201, Aug. 22, Spinning, doubling, &c.
 — H., & Steel, J., 975, Apr. 13, Cooling worts.
 — J. (Lair & Bilange), 1314, May 16, Sugar.
 — J. E., 154, Jan. 21, Traction-engines.
 — J. E., 192, Jan. 25, Railway points, signals, &c.
 — J. E., 418, Feb. 17, Railways and rolling stock.
 — J. E., 419, Feb. 17, Motive-power.
 — Marvin, 3205, Nov. 27, Melting furnaces.
 — Matthew, 420, Feb. 17, Fire-alarm & thief detector.
 — Matthew, 1749, July 5, Sink-traps.
 — Matthew, 2578, Sep. 29, Stench-traps.
 — N., 2633, Oct. 5, Sewing-machines.
 — P., 278, Feb. 2, Bushes for casks.
 — P., 793, Mar. 23, Bushes for casks.
 Wilson, P., & Hunter, J. (Wilson), 1912, July 21, Stop-
 [motion].
 Wilson, R., 1335, May 17, Mangling and calendaring.
 — S., 534, Feb. 28, Braces, straps or belts.
 — W. A., & Duncan, G., 3047, Nov. 11, Printing
 [machines].
 — W. P., 717, Mar. 17, Gas.
 Wimshurst, E., 708, Mar. 16, Screw-propellers.
 Winchester, O. F. (Hughes), 32, Jan. 6, Fire-arms.
 Winder, Richard, & Wood, T., 1496, June 5, Skifes or
 [frames of ploughs].
 — Richard, 2922, Oct. 31, Steam-ploughs.
 — Robert, 321, Feb. 7, Composing type.
 Windhausen, F. (Hughes), 2355, Sep. 6, Expansion-
 [valves].
 Winkler, A., & Zitowitsch, A. (Lake), 943, Apr. 10,
 [Utilizing exhaust steam].
 Winn, M. L., 966, Apr. 12, Washing & drying the hair.
 Winspear, J. E., & Hoskold, H. D., 1240, May 8, Sur-
 [veying instruments].
 Winstanley, W., 780, Mar. 22, Engines and boilers.
 Winter, W., 157, Jan. 21, Sewing-machines.
 — W., 313, Feb. 6, Lathes.
 — W., 2121, Aug. 11, Sewing-machines.

- Winter, W., 3345, Dec. 11, Sewing-machines.
 — W., 3420, Dec. 18, Sewing-machines.
 Winterbottom, J., & Nixon, J., 970, Apr. 12, Knife [tangs, &c.
 Wippell, H. H., 550, Mar. 1, Convertible desks & seats.
 Wise, W. L. (*Wacha*), 483, Feb. 23, Breech-loading [ordnance.
 — W. L. (*Küstner*), 1095, Apr. 25, Horse-shoes.
 — W. L. (*Bide & Co.*), 2702, Oct. 11, Operating on [wool cardings, &c.
 Witham, F. A., & Whitham, T., 816, Mar. 27, Wind- [ing frames.
 — F. A., & Whitham, T., 1629, June 21, Wind- [ing frames.
 Wittram, F. (*Lake*), 2138, Aug. 14, Dress protectors.
 Witzemann, H., 3266, Dec. 2, Linked chains.
 Wolfe, A. G. (*Lake*), 2106, Aug. 10, Covering wire.
 Wolfe, D. J., 3087, Nov. 15, Engine governor.
 Wolstenholme, R., Buckley, H. & R. W., 3051, Nov. 11, [Velvets, &c.
 Wood, B. H. (*Wood*), 2421, Sep. 14, Paint or varnish.
 Wood, C. H., 2918, Oct. 31, Grinding, &c. knife and [fork blades.
 — G. B., & Wilson, A., 2478, Sep. 20, Bessemer steel.
 — I., 2849, Oct. 24, Winding frames.
 — James & J., Gardner, H., Lowe, R., & Pickering, J., [276, Feb. 1, Spring mattresses, &c.
 — James & J., Pickering, J., Gardner, H., & Lowe, R., [1249, May 9, Bedsteads, mattresses, &c.
 — John, 3234, Nov. 30, Polishing yarn or thread.
 — John B., 911, Apr. 6, Fabric for covering floors, &c.
 — John E. (*Wood*), 2421, Sep. 14, Paint or varnish.
 — John R., & Wilde, W., 1987, July 28, Joints or [hinges, &c.
 — Joseph, 3419, Dec. 18, Bedsteads, mattresses, & seats.
 — Joseph & J., Gardner, H., Lowe, R., & Pickering, J., [276, Feb. 1, Spring mattresses, &c.
 — Joseph & J., Pickering, J., Gardner, H., & Lowe, R., [1249, May 9, Bedsteads, mattresses, &c.
 — T., 3522, Dec. 30, Road and tram omnibuses.
 — T., & Winder, R., 1496, June 5, Skifes or frames [of ploughs.
 Wood, W. A. (*Griffin*), 1324, May 16, Reaping and [mowing.
 Woodbridge, F., 3175, Nov. 23, Dressing & cleaning grain.
 Woodbury, W. B. (*Smith*), 948, Apr. 11, Barometer [or hygrometer.
 Woodcock, J., & Oldroyd, J. & M., 299, Feb. 3, Dyeing [fabrics.
 — J., & Oldroyd, J. & M., 1229, May 6, Dyeing [fabrics, &c.
 Woodhouse, J. E., & Chaffer, W., 1222, May 5, Clear- [ing, drawing, spinning, &c. fibres.
 Woodley, J. (*Lake*), 2485, Sep. 21, Boots and shoes.
 Woods, E. & J., 1086, Apr. 25, Drawing wire.
 — J. & E., 1086, Apr. 25, Drawing wire.
 Woods, J. O. (*Lake*), 1708, June 30, Ripping instru- [ment and wrench.
 Woodson, F. A. (*Lake*), 910, Apr. 5, Furnaces & boilers.
 Woodward, L., 3009, Nov. 8, Knitting hosiery.
 — L., 3480, Dec. 23, Stockings, &c.
 Woolnough, W., & Priest, A., 486, Feb. 23, Drilling land.
 Woore, J. W., 932, Apr. 8, Screw bolts, rivets, &c.
 Wormald, W., & Hall, S. H., 1020, Apr. 25, Sewing- [machines.
 Worrall, B. H., 1391, May 24, Feeding furnaces.
 Wordell, T. W., & Smith, J. (*Johnson*), 1646, June 22, [Spark arresters.
 Worthman, J. E. (*Clark*), 3463, Dec. 21, Reefing & furl- [ing sails.
 Wotton, J. W. (*Starr*), 296, Feb. 3, Buoyant mattress.
 Wray, J., 1884, July 19, Reaping machines.
- Wrench, J. H., 604, Mar. 7, Magic lantern slides.
 Wright, A., 1403, May 25, Mustard pots, &c.
 — E., 516, Feb. 25, Applying breaks to wheels.
 — E., 621, Mar. 8, Indicating apparatus for vehicles.
 — G., 1549, June 12, Billiard tables, &c.
 — James, 723, Mar. 17, Asphalt and cement.
 — James (*Minor & Britton*), 1208, May 4, Water- [proof compounds.
 — John, 2273, Aug. 29, Constructing tunnels below [water.
 — L., 667, Mar. 14, Potato drills.
 — L., 1561, June 13, Potato drills.
 — R. A., 2860, Oct. 25, Railway door fastenings, &c.
 — S., & Barrett, R., 1562, June 13, Hand-stampers.
 — S., & Barrett, R., 3374, Dec. 13, Hand-stampers.
 — W., 548, Mar. 1, Roads and pavements.
 — W., 827, Mar. 28, Obtaining silver, &c. from [pyrites.
 — W., 2764, Oct. 18, Flushing water-closets, &c.
 Wright, W. (*Newton*), 1850, July 14, Condensers.
 Wright, W. C., Pendlebury, R., & Ainsworth, E., 3034, [Nov. 10, Bleaching.
 Wrigley, B., 1069, Apr. 22, Brick-kilns, &c.
 — T. (*Greiff*), 58, Jan. 10, Railway-sleepers.
 — T., Weatherill, H., & Cockshoot, J., 179, Jan. 24, [Railway carriages.
 Wurtz, H. (*Newton*), 3503, Dec. 28, Gas.
 Wylam, E., 3093, Nov. 16, Mixing, rolling, &c. dough.
 Wyley, A., 425, Feb. 17, Fire-arms.
 Wyndham, C., 924, Apr. 8, Bicycles.

Y.

- Yates, W., 2677, Oct. 9, Miners' lamps.
 Yautier, A. (*Gedge*), 2203, Aug. 22, Ball-proof cuirass.
 Yeates, R., 112, Jan. 16, Opening tins.
 Yeomans, W. H., 3471, Dec. 22, Sewing-machine needles.
 Yockney, S. H., & Sims, F. M., 872, Apr. 1, Signalling.
 Yonge, W. L., 880, Apr. 3, Watches.
 Yorkston, R. P., & Bainbridge, C. T. (*Cropper*), 675, [Mar. 14, Printing.
 Young, A. (*Barr*), 2220, Aug. 24, Propelling ships.
 — H. & J. L. (*Lake*), 3256, Dec. 1, Sawing stone.
 Young, H. B., 80, Jan. 12, Window-blind mountings.
 — J., 248, Jan. 30, Drying substances.
 — J., 2122, Aug. 11, Carbonate of soda.
 — J., 2123, Aug. 11, Hydrocarbon oils.
 — J., 2557, Sep. 28, Carbonic acid.
 — J., 2558, Sep. 28, Carbonate of soda.
 Young, J. L. & H. (*Lake*), 3256, Dec. 1, Sawing stone.
 — Mc C. (*Haseltine*), 2288, Aug. 30, Matches.
 Younger, T. C., & Scaife, J., 89, Jan. 13, Washing, wring- [ing, &c.
 — T. C., & Scaife, J., 502, Feb. 25, Packing pis- [tons, &c.
 Yull, G. T., & Griffin, J. T., 771, Mar. 22, Reaping & mowing.

Z.

- Zahn, H., 2128, Aug. 12, Screw-propellers.
 Zamoyski, J. M., & Jackson, W., 2237, Sep. 8, Railway [&c. wheels & axles.

[Zam-Zen]

ALPHABETICAL INDEX OF PATENTEES.

[Zim-Zuc]

Zamoyski, J. M., & Jackson, W., 3399, Dec. 15, Axles &
[crank-shafts].
Zanni, G., 2721, Oct. 13, Magnetic bells and signals.
Zawadski, A., 1089, Apr. 25, Organs, pianofortes, &c.
Zeller, G., 2110, Aug. 10, Fire-arms.
Zengeler, J. 2325, Sep. 2, Coloring and staining marble.
Zenger, K. W., 2247, Aug. 26, Gas and graphite.

Zimmer, L., & Mc Evoy, C. A., 764, Mar. 21, Floor-cloths.
Zipser, A., 1868, July 11, Preventing incrustation.
Zitowitsch, A., & Winkler, A. (Lake), 943, Apr. 10, Uti-
[lizing exhaust steam].
Zuccato, E. de, 2383, Oct. 27, Making and copying draw-
[ings, &c].

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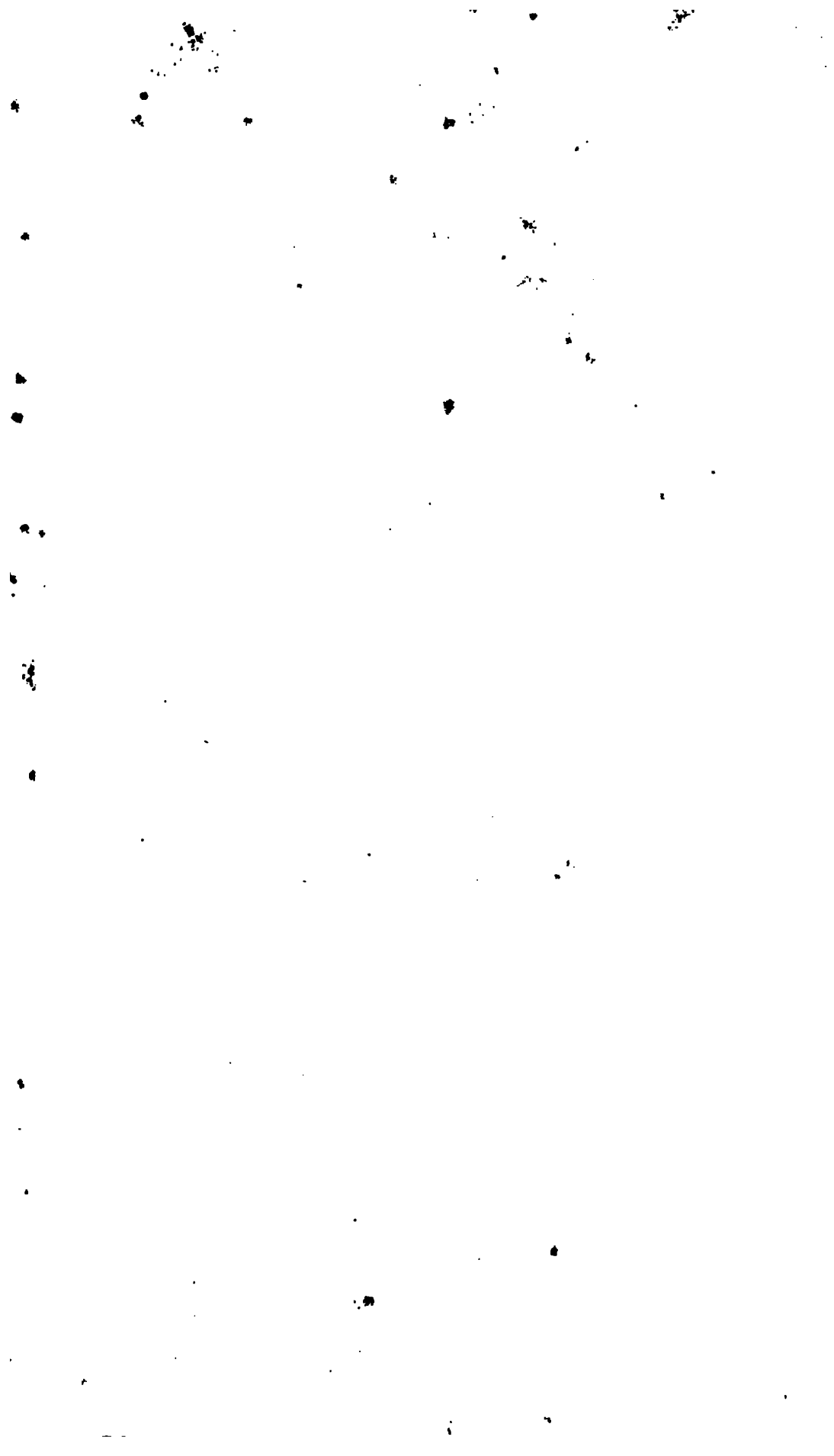
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For the Year 1872.

[The names printed in *Italic* are those of the persons by whom the inventions have been communicated to the Applicants for Letters Patent. The figures following the names are the consecutive numbers of the Applications.]

[Aba-Alb]

[Alb-Ail]

A.

Abate, E., 1853, June 19, Preserving food, making ice.
Abbott, O. G., 614, Feb. 26, School desks, &c.
 — **W.**, 2243, July 27, Portable baths.
Abel, C. D. (*Proell*), 155, Jan. 18, Governors.
 — **C. D.** (*Durfee*), 685, Mar. 6, Bessemer steel and [iron; iron castings].
 — **C. D.** (*Hainsworth*), 480, Feb. 15, Moulds, &c., [for metal castings].
 — **C. D.** (*Ville*), 958, Apr. 1, Superphosphate of [lime].
 — **C. D.** (*Marcus*), 2058, July 8, Air-gas.
 — **C. D.** (*Dreyscharff*), 2229, July 26, Spinning [mules].
 — **C. D.** (*Orlowski*), 2883, Sept. 30, Traction engines.
 — **C. D.** (*Gailbordt*), 3576, Nov. 28, Artificial fuel [blocks].
 — **C. D.** (*Booroff*), 3788, Dec. 13, Conveying sewage [from cesspools, &c].
 — **C. D.** (*Lucas*), 3923, Dec. 27, Paper-weights, boxes, [&c].
Abraham, G., 249, Jan. 25, Window sashes.
Absterdam, J. (*Lake*), 1135, Apr. 17, Iron bars, plates, &c.
Acton, R. G., & Cole, F., 2091, July 11, Compressed [air engines].
Adam, J. L., 2879, Sep. 30, Taps.
Adams, E., 2076, July 10, Engines & vehicles for rail- [ways, &c].
 — **E. M.**, 664, Mar. 4, Galvanic apparatus for cura- [tive purposes].
 — **H. O., & Doudney, D. A.**, 178, Jan. 19, Portable [disinfectant].
 — **J.**, 2258, July 29, Revolver fire-arms.
 — **W. B.**, 2076, July 10, Engines and vehicles for [railways, &c].
 — **W. M.**, 2379, Aug. 9, Instrument for solving [triangles].
Adamson, W. (*Johnson*), 973, Apr. 3, Treating hair [bristles].
 — **W.** (*Johnson*), 1051, Apr. 9, Treating animal [and vegetable substances].
Adlam, H., 872, Mar. 22, Stays.
Agar, N., 1335, May 2, Bricks, &c.
 — **N.**, 3854, Dec. 19, Window sashes and frames.
Aiken, J. E., & Sirett C. (*Lake*), 2099, July 11, Bale [ties, &c].
Aitken, P., 2948, Oct. 7, Gas stoves.
Albaret, A. B. (*Johnson*), 1826, June 17, Reaping & [mowing].

Albert, E. & H. (*Gerland*), 2614, Sep. 3, Phosphoric [acid, phosphates, &c].
 — **H. & E.** (*Gerland*), 2614, Sep. 3, Phosphoric [acid, phosphates, &c].
Alden, A. (*Lake*), 3691, Dec. 6, Horse-shoe nails.
Alder, H., 2514, Aug. 24, Dry meters.
Alderman, E. C., & Longman, S. P., 1402, May 8, Re- [gistering issue of tickets].
Aldridge, J. H., 3157, Oct. 24, Water & dry closets & [privies].
Alekan, F. & I., 1141, Apr. 17, Screw studs for shirts, &c.
 — **I. & F.**, 1141, Apr. 17, Screw studs for shirts, &c.
Alexander, A., & Wright, J. R., 2497, Aug. 22, Iron [and steel].
Alexander, T. H. (*Lake*), 1425, May 10, Clamp ropes, &c.
 — **T. H.** (*Haseltine*), 2282, July 30, Converting [cast iron into steel].
Alexandre, L. (*Ragon*), 1181, Apr. 20, Case for railway [tickets, &c].
Alison, A., 3163, Oct. 25, Preserving and packing meat.
Allan, A., 3761, Dec. 11, Land and sea batteries; ship [saloons, &c].
 — **R.** (*Riddell*), 1475, May 15, Reflectors.
Allardyce, W. S., 2891, Oct. 1, Closets, commodes, &c.
Alleau, A. (*Dann*), 3064, Oct. 17, Producing heat.
Allen, —, & Hopson, — (*Cropper*), 1757, June 11, Ink [fountains for printing presses].
 — **A. F.** (*Lake*), 163, Jan. 18, Relief valves.
 — **A. N., & Dewey, R. H.** (*Bonneville*), 375, Feb. 5, [Lighting gas].
 — **D. B., Enoch, J., & Terrell, E. P.** (*Lake*), 315, [Feb. 1, Operating loom shuttles].
 — **F. S., & Ritchel, C. F.** (*Clark*), 3388, Nov. 13, [Bolts and nuts].
 — **F. S., & Ritchel, C. F.** (*Clark*), 3399, Nov. 14, [Boring and drilling].
Allen, J. F., 894, Mar. 23, Steam generators.
 — **R. H.**, 2034, July 5, Ships' berths.
 — **W. T., & FitzGerald, D. G.**, 2208, July 24, Electro- [deposition of metals, &c].
Allerton, R., 114, Jan. 15, Feed for thrashing machines. [&c].
Alley, S., 2032, July 5, Steam-boilers.
 — **S.**, 3342, Nov. 11, Measuring, pumping, &c.; [motive-power].
Alleyne, J. G. N., 2930, Oct. 4, Making and refining [sugar, rum, &c].
Allibon, G., & Manbré, A., 318, Feb. 1, Steam-boilers.
Alliger, E. (*Smith*), 2246, July 27, Lettering and [ornamenting mirrors].
Allingham, J. J., 452, Feb. 13, Propelling vessels.
Allison, J., 3320, Nov. 8, Planing wood, &c.

- Allix, G., & Gardner, H., 916, Mar. 26, Bottle-stoppers, &c.
 Allmark, J., Haigh, B., & Chadderton, J., 1262, Apr. 27, [Cocks and water gauges.
 Alloway, R. M. M., 2138, July 17, Drying oak-bark, [flax, &c.
 Allport, S. B., 3518, Nov. 23, Fire-arms.
 Alsing, G., 3412, Nov. 15, Treating sewage, &c.
 Amberg, W. A. (Morgan-Brown), 3220, Oct. 31, Self-indexing holder, file, and binder for letters, &c.
 Ambler, W., 2484, Aug. 21, Paper tubes.
 American Seal Lock Co. (Mills), 252, Jan. 25, Seal locks.
 Ames, G. (Newton), 1997, July 2, Hardening steel.
 Amies, J., 301, Jan. 31, Foot-warmers.
 Anders, R., & Errani, L. C. (Palmer), 1126, Apr. 16, [Motive-power.
 — R., & Errani, L. C. (Hughes), 3481, Nov. 21, [Motive-power engine.
 Anderson, C., 1483, May 15, Indicator for tram cars and [letter boxes.
 — G., & Buchanan, J., 1768, June 12, Drawing [retorts.
 — James, 513, Feb. 17, Reducing oxides and [obtaining iron, sodium, potassium, phosphorous, chlorine, &c.
 — James, 1089, Apr. 12, Refining iron.
 — James, 2655, Sep. 7, Moulds for castings.
 Anderson, John (Newton), 1352, May 3, Drain pipes, [&c.; artificial stone.
 Anderson, John A., 729, Mar. 9, Preserving ships' car- [goes; extinguishing fire in ships.
 — Joseph L., & Ellington, E. B., 3107, Oct. 22, [Storing grain and seed.
 — S.S., 3110, Oct. 22, Compressing bricks, tiles, &c.
 — W. Lanphier, 3953, Dec. 30, Preserving equi- [librium in vessels, &c.
 — W. Luff, 756, Mar. 12, Fastenings for gaiters, [leggings, &c.
 Anderton, S. B., & Gouldin, J., 3615, Nov. 30, Combing [machinery.
 André, G. G., 2312, Aug. 2, Raising water from mines, &c.
 Andree, B. (Prince), 3824, Dec. 17, Gas burners.
 Andrew, W. H., 184, Jan. 19, Securing, &c. handles of [cutlery, and tea-pots.
 Andrews, A. F., 705, Mar. 7, Malleable cast iron.
 Andrews, E. R., Clague, W. H., & Randall, R. B. (Lake), [855, Mar. 21, Attaching covers to pamphlets.
 — E. W., & Field, G. B. (Lake), 828, Mar. 19, [Telegraphs.
 — E. W., & Field, G. B. (Lake), 829, Mar. 19, [Telegraphs.
 Andrews, G. H., 3645, Dec. 3, Extracting fibres.
 — G. H., 3646, Dec. 3, Treating fibrous plants.
 — W., 3245, Nov. 1, Sewing-machines.
 Andrews, W. D. (Newton), 676, Mar. 5, Hoists, &c.
 Andrews, W. W., 99, Jan. 12, Wet gas-meters.
 Angell, B. J., & Marchant, R. M., 1356, May 4, Horse-shoes.
 Annandale, A., 270, Jan. 27, Paper-making.
 — A., 548, Feb. 20, Knotter plates.
 Anne, J. Saint (Henderson), 3900, Dec. 24, Match-box.
 Anonyme [Société] des Manufactures des Glaces et Pro- [duits Chimiques (Johnson), 2220, July 25, [Plate glass.
 Ansell, W., 2349, Aug. 7, Fire-arms.
 Anson, W., 3791, Dec. 14, Fire-arms.
 Antonin, F. A. (Johnson), 526, Feb. 19, Liqueurs or cordials.
 — F. A. (Johnson), 971, Apr. 2, Liqueurs or cordials.
 Appleby, C. J., & Beaumont, F. E. B., 392, Feb. 7, Rock- [drilling, tunnelling, &c.
 Appleton, C. J., 3476, Nov. 21, Sewing-machines.
 Appleton, C. J. (Brewer), 1546, May 21, Stockings.
 Archer, T., 3013, Oct. 12, Pulleys.
 Argall, J. (Gilbee), 41, Jan. 5, Steam water-heaters.
 Arlincourt, L. C. A. J. G. D' (Clark), 255, Jan. 25, [Electro-magnets.
 Armes, G. A., Glassie, M. H., & Nash, J. C. (Lake), 1957, [June 28, Fastenings for bedsteads, &c.
 Armitage, J. S., & Piers, Sir E. F., 2856, Sep. 27, Fire-arms.
 Armytage, J., 1529, May 18, Ventilating sewers.
 Arnau, R. Bañolas-, 198, Jan. 22, Registering quantities [of liquids withdrawn from casks.
 Arnold, J., 699, Mar. 7, Administering medicines to animals.
 — J., 1404, May 8, Enemas.
 Arrott, A. R., 2446, Aug. 16, Carbonate of soda.
 Arson, L. F. A. (Johnson), 312, Jan. 31, Mariners' com- [passes.
 Arthur, J., 1884, June 22, Screw bolts and nuts.
 Arundel, H. B., & Elce, J., 3025, Oct. 14, Preparing fibres.
 Ash, G., 3352, Nov. 11, Stoves or fire-grates.
 — H. C., 3367, Nov. 12, Ice safes.
 Ashberry, P. H., 164, Jan. 18, Casting metals.
 Ashbury, J., 3563, Nov. 27, Seat fittings for railway car- [riages, &c.
 — J. (Hemje), 974, Apr. 8, Propelling & steering [vessels.
 Ashcroft, W., 30, Jan. 4, Buckles or clasps.
 — W., 1486, May 16, Presses and bale-ties.
 Ashe, R. (Morgan-Brown), 2706, Sep. 12, Sewing-machines.
 Ashlin, H. C., & Clover, C. J., 2244, July 27, Steam-engines.
 — H. C., & Clover, C. J., 2245, July 27, Registering [passengers in omnibuses, &c.
 Ashton, F. W., 3607, Nov. 30, Steam-engines.
 — F. W., 3608, Nov. 30, Working steam-engine [valves.
 — T. A., 1390, May 7, Coal & other baskets or "skips."
 Ashwell, J., 2134, July 16, Furnaces; saving fuel.
 — W. H., 3073, Oct. 17, Kilns; utilising waste heat.
 Ashworth, H., 1074, Apr. 11, Spinning and doubling.
 — J., & Whitaker, G., 1933, June 26, Preparing [fibres for carding.
 Askham, J. U., 3526, Nov. 25, Producing metal angles.
 Asquith, J. D., 209, Jan. 23, Fulling and washing fabrics.
 — S. E., & Greenwood, F. A., 1000, Apr. 5, Spinning.
 Assman, A. (Clark), 3571, Nov. 27, Grinding and polishing.
 Aston, C. H., 1183, Apr. 20, Springs for mattresses, &c.
 — J. J., 116, Jan. 15, Propelling vessels.
 Astrop, W., 2991, Oct. 10, Drying sewage, &c.
 Atkin, R., 1273, Apr. 27, Ships and vessels.
 — B., 3031, Oct. 15, Constructing, &c. ships.
 Atkins, H. W., 2222, July 25, Springs for mattresses, [chairs, &c.
 — J., 1686, June 4, Metallic bedsteads and cots.
 — T., 1898, June 24, Pumps, &c.
 Atkins, T., & Drever, H. (Millward), 1850, June 19, [Musical instruments.
 Atkinson, I. (Davies), 2902, Oct. 2, Curing & packing hams.
 Atkinson, J., 2750, Sep. 17, Washing machine.
 Atwood, L., & others (Edwards), 777, Mar. 14, Dial plates [for clocks, &c.
 Aubertin, N. A., & Hannart, L. J. (Clark), 3441, Nov. 18, [Walking sticks.
 Aubin, E. L. A. Saint- (Gedge), 1047, Apr. 9, Feeding bottles.
 Audouin, P. (Clark), 1456, May 13, Extracting anthra- [cene and pitch.
 Augsburger Kammgarnspinnerei (Brookes), 2498, Aug. 22, [Stop motion for spinning apparatus, &c.
 Avery, C., 714, Mar. 8, Rotary steam-engines and pumps.
 Avril, C. (Bonneville), 3317, Nov. 8, Furnaces.
 Ayckbourn, F., 2175, July 20, Arm for impelling mis- [siles, &c.
 Aylesbury, H., 248, Jan. 25, Bottle stoppers.
 Ayre, A. S., 177, Jan. 19, Weighing grain.
 Ayres, G. 1281, Apr. 29, Signalling on board ship.
 — W. P., 3787, Dec. 13, Horticultural buildings.
 Ayrton, F., & Brown, S. S., 598, Feb. 24, Looms.

B.

- Babcock, A. & N., Ewell, C., & Howes, S.* (Benson), 2192,
[July 23, Smut machine & grain separators,
— *N. & A., Ewell, C. & Howes, S.* (Benson), 2192,
[July 23, Smut machine & grain separators.
Bablon, V., 616, Feb. 28, Measuring the delivery of currents.
Bacon, J., 3635, Dec. 3, Brick and other kilns.
Badin, L. A., 1065, Apr. 11, Deodorising excrement;
[manure.
— L. A., 3913, Dec. 24, Closets; collecting, &c. faecal
[matters.
Baerle, V. Van, 1851, June 19, Soap, &c.
Baggs, L., 108, Jan. 13, Producing lines, &c. on metallic &
[other surfaces.
Bagley, R., 2990, Oct. 10, Holders for lamp shades, &c. &
[candles.
— T., 3421, Nov. 16, Varnish.
Bagster, B., 2373, Aug. 9, Locks for carriage doors, &c.
Bailey, B. M., & others (Edwards), 777, Mar. 14, Dial plates
[for clocks, &c.
— E. H. (Clark), 2084, July 10, Carpet pads.
— G. E., Goodrich, C. B., & Locke, J. A. (Lake), 857,
[Mar. 21, Bakers' ovens.
Bailey, J., 2254, Oct. 7, Supplying water to closets, &c.
— W. H., 949, Mar. 30, Indicating heat.
— W. H., & Westley, J., 2709, Sept. 12, Lubricators.
— W. H., & Grindrod, J., 3808, Dec. 16, Raising, &c.
[liquids.
Bain, J. (Law), 1241, Apr. 25, Screw-drivers.
Bainbridge, E., 3817, Dec. 17, Registering apparatus.
Baird, J., 1516, May 18, Treating oils.
Baker, C. H. (Brewer), 1055, Apr. 10, Tuyeres.
Baker, F. R., 287, Jan. 30, Placing driving bands on drums.
— J. L., & Cox, T. N., 560, Feb. 21, Ploughs.
— J. L., & Cox, T. N., 1551, May 21, Ploughs.
— J. M. B., 1996, July 2, Disinfecting & deodorising.
Baker, R., Ferguson, P., and Bates, F. G. (Hughes), 179,
[Jan. 19, Clutch for converting rotary to reciprocating
[motion.
Baker, W. C., 3807, Dec. 16, Heating railway cars.
Baldwin, N. A. (Hughes), 590, Feb. 23, Sewing boots &
[shoes.
Balfe, G., 1168, Apr. 19, Winding yarn.
Balin, P., 3001, Oct. 11, Hanging-papers.
Ball, C. J., 3491, Nov. 21, Drilling and boring holes.
Ball, J. (Fletcher), 2254, July 29, Eye cup.
Ballantyne, D., 3848, Dec. 18, Spotted yarns or threads.
Ballardie, D., 1774, June 12, Appliance for holding window
[sashes.
Ballier, E., 2452, Aug. 16, Cocks or valves.
Bamlett, A. C., 2485, Aug. 21, Reaping and mowing.
— A. C., 3035, Oct. 15, Reaping and mowing.
Bang, I., Provost, L. L. H., & Blanchard, L. H. (Clark),
[388, Feb. 6, Treating sewage, &c.
Banks, J., & Jaques, J. A., 305, Jan. 31, Surgical instru-
[ments.
— L., 3362, Nov. 12, Fuel.
— W., & Simcox, E., 1224, Apr. 24, Box irons.
Banner, E. G., 2303, Aug. 1, Trapping sewers or drains.
Bañolas-Arnau, R., 198, Jan. 22, Registering quantities of
[liquids withdrawn from casks.
Bantz, G. (Haseltine), 2440, Aug. 15, Boiler furnaces.
Barancoesky, W., & Broadwell, L. W. (Smith), 3186,
[Oct. 26, Machine guns, frames, and cartridge cases.
Baranowski, J. J., & Skwarecow, J., 3034, Oct. 15, Fixing
[bottle capsules.
Barbour, E. D., 2437, Aug. 15, Calculating machine.
— J., 2919, Oct. 3, Hackling machine holders.
Bardy, C., Gibon, E., & Dusart, L., 812, Mar. 18, Convert-
[ing starch into gum, &c.
Barker, C. M., 84, Jan. 10, Propelling ships.
— C. M., 2071, July 9, Propelling ships.
— E. D., 2754, Sept. 17, Working railway breaks.
— G. E., & Waplington, W., 323, Feb. 1, Spiegeleisen.
— J., & Newall, P., 2012, July 3, Dressing leather.
— J., & Newall, P., 3336, Nov. 9, Rolling leather.
— J. A., & Jones, D., 3493, Nov. 22, Points for tram-
[ways.
Barlow, C. (Davies), 2457, Aug. 17, Sawing wood.
— C. P., & Carr, D. A., 1520, May 18, Railway sig-
[nalling.
— H. B. (Rousseau & Cochard), 464, Feb. 14, Pre-
[serving substances.
— H. B., & Brown, D. C., 781, Mar. 14, Healds for
[weaving.
— H. B. (Shinn), 871, Mar. 22, Looms.
— H. B. (Naegeli), 1203, Apr. 22, Cooling wort, &c.
— H. B. (Renard), 1613, May 28, Washing, dyeing,
[&c. fibrous materials, &c.
— H. B. (Gatty), 2834, Sept. 25, Spanners & screw
[keys.
— S., 1147, Apr. 17, Preventing railway accidents.
Barlow, W. H., & Walker, B. L. (Newton), 2700, Sep. 11,
[Mowing machines.
Barnard, M., & Tildesley, M., 1029, Apr. 6, Door fasteners,
[&c.
Barnes, C., Gwynn, G., & Gilbert, G. (Newton), 995,
[Apr. 4, Packings for steam-engines, &c.
Barnett, H. B., & Slade, W. B. M., 2913, Oct. 3, Disin-
[fecting and cleansing liquids.
— H. B., & Slade, W. B. M., 2934, Oct. 4, Deodo-
[rising and disinfecting fluids.
— J., & Vokins, W., 797, Mar. 16, Economizing fuel.
— J., & Vokins, W., 798, Mar. 16, Furnaces.
— L., 651, Mar. 1, Reversible and seamless coats.
Barnley, G., 2467, Aug. 19, Lettering name-bands for um-
[brellas, &c.
Barr, A., 3343, Nov. 11, Water-power engines.
Barr, W. (Cockburn), 3429, Nov. 16, Barrows.
Barraclough, A. & T. C., 441, Feb. 12, Damping, stiffen-
[ing, oiling, and colouring.
— T. C. & A., 441, Feb. 12, Damping, stiffen-
[ing, oiling, and colouring.
Barre-Pin, J. B. M. E. & R. M. J. B. H. H. (Newton),
[37, Jan. 4, Preserving substances.
— R. M. J. B. H. H. & J. B. M. E. (Newton),
[37, Jan. 4, Preserving substances.
Barret, P., & Verdreau, C. (Johnson), 1121, Apr. 15,
[Files, rasps, &c.
Barrett, E. C., & Cope, J., 1659, May 31, Printing.
Barrett, R. T., Plush, E. T., & Croll, S. (Lake), 909,
[Mar. 25, Bearings for journals.
Barrington, R., 3745, Dec. 10, Checking collection of money.
Barrow, James, & Crosfield, C. J., 1171, Apr. 19, Util-
[izing saccharine syrups.
— Joseph, 3199, Oct. 29, Cutting screw threads, &c.
— R. K., & Ollard, J. F. (Gottberger & Tappin),
[1647, May 31, Playing cards.
Barry, A. B., 2061, July 8, Sewing-machines.
Barthel, P., Capitaine, F., & Holzmann, P. (Prince),
[3886, Dec. 21, Asphalt for paving.
Barthelmes, E., 291, Jan. 31, Shuttle sewing-machines.
Bartholomew, C., 2521, Aug. 24, Cutting coal.
— E. G., & Newman, G. G., 3329, Nov. 9,
[Signalling and connecting wires in trains.
Bartle, W. (Bartle), 2116, July 13, Tew irons for forges, &c.
Bartle, W. W. (Bartle), 2116, July 13, Tew irons for
[forges, &c.
Bartlett, John, 2854, Sep. 27, Mixing teas, coffees, &c.
— Joseph, 2215, July 25, Printing.

- Bartlett, W. L., & Lindsley, I.* (Clark), 702, Mar. 7, [Covering carding rolls, &c.]
Barton, E. M., & Gray, E. (Haseltine), 3586, Nov. 28, [Printing telegraphs]
Barton, John, & Pontifex, E. A., 3033, Oct. 15, Water [waste preventers]
 — Joseph, 3838, Dec. 18, Furnaces.
 — S., 755, Mar. 12, Rose and nozzle for syringes, &c.
 — S., 2393, Aug. 10, Protecting the face and head and [respiring in bad atmospheres]
Basford, W., 3285, Nov. 6, Bricks and tiles.
Bash, G., W. & S., 52, Jan. 6, Bobbins.
 — S., G. & W., 52, Jan. 6, Bobbins.
 — W., S. & G., 52, Jan. 6, Bobbins.
Bass, J. H., 2087, July 10, Coffee pots.
 — J. H., 3499, Nov. 22, Shield for railway axle boxes.
Bastaert, A. A. (Clark), 1245, Apr. 25, Drying and [bleaching fabrics, &c.]
Batchelder, W. W. (Lake), 783, Mar. 14, Gas-lighting.
 — W. W. (Lake), 1378, May 6, Electric torches.
 — W. W. (Lake), 3299, Nov. 7, Electric torches.
Bate, J., Edwards, S., & Follows, F. W., 2949, Oct. 7, [Chaff-cutting machines]
Bateman, J. J., 3185, Oct. 26, Fire grates.
Bates, F. G., Baker, R., & Ferguson, P. (Hughes), 179, [Jan. 19, Clutch for converting rotary to reciprocating motion]
Bates, J., Dixon, J. W., & Buttery, W., 3556, Nov. 26, [Extracting caps from cartridge cases]
Bateson, S. S., 2144, July 17, Treating hides or skins.
Baudot, E. N. (Murdoch), 2837, Sep. 25, Loom for [tapestry, &c.]
Bauer, G. & Hiess, F. (Prince), 1282, Apr. 29, Tobacco [pipes and cigar tubes]
Baumann, A., 389, Feb. 7, Steam-engines.
 — A., 3509, Nov. 23, Steam-engines.
Baville, E. (Bonneville), 2640, Sep. 5, Tool holders.
Bavin, J., 772, Mar. 14, Steam-engines and generators.
Baxter, T. W. (Newton), 3750, Dec. 10, Setting carbon [points]
 — W. (Lake), 1244, Apr. 25, Steam-engines.
Baxter, W. H., 893, Mar. 23, Weighing or measuring corn, [&c.]
Bayley, C. H., & Stott, F. L., 581, Feb. 23, Winding yarn [or thread]
 — C. H., & Stott, F. L., 3174, Oct. 26, Reeling yarns, &c.
 — E. H., 496, Feb. 16, Fire-escapes.
Baylis, R. C. T., 2993, Oct. 10, Cutting boards and [patterns]
Bayliss, W., 2789, Sep. 20, Steam-boilers.
Bayly, M., 319, Feb. 1, Printing, perforating, stamping, [&c.]
Baynes, J., 998, Apr. 4, Headings, &c. for woven fabrics.
Bazault, F. G., & Roche, I. J. (Brewer), 1466, May 14, [Steel, &c.]
Bazzichelli, R. (Gilbee), 2860, Sep. 28, Fuse for shell.
Beale, W., 1893, June 22, Turning over music leaves.
Beaman, S. J., & Onions, J., 766, Mar. 14, Puddling [furnaces]
Beamish, N., 532, Feb. 19, Steam and other engines.
Bean, T., 2267, July 30, Folding, &c. newspapers.
Bear, T., 410, Feb. 8, Saving life from fire.
 — T., 468, Feb. 14, Adapting mica, &c. to water gauges.
Beard, E. J. (Newton), 1706, June 5, Bale tie.
Beare, H., 2608, Sep. 2, Hay-making machines.
Beath, J. M., & Martin, S. B. (Lake), 2210, July 24, [Making ice, cooling rooms, &c.]
Beattie, W. G., 2096, July 11, Axle-boxes.
Beaumont, F. E. B., & Appleby, C. J., 392, Feb. 7, Rock- [drilling, tunnelling, &c.]
Bebro, M., 2718, Sep. 13, Numbering & printing tickets, &c.
Becker, J. (Michaelis), 1566, May 22, Stoppering bottles.
Becker, J. (Michaelis), 1567, May 22, Bottle capsules.
 — J. (Michaelis), 2686, Sep. 11, Capsuling bottles.
Beckett, J., 2743, Sep. 16, Washing, &c. photographs.
Beckman-Olofson, E. (Bonneville), 376, Feb. 5, Drinks.
Becks, A. T., 1514, May 18, Treating iron scrap.
Bede & Co. (Murdoch), 2908, Oct. 2, Self-acting mules.
Bedson, G., 1469, May 14, Puddling furnaces.
 — G., 3941, Dec. 28, Rolling wire and other rods.
Bedwell, F. Le B., 1517, May 18, Boats' fittings.
 — F. Le B., 1595, May 25, Life buoys.
Begg, W., 1580, May 23, Feed-water heater.
Beil, M., 3158, Oct. 24, Lighting cigars, &c.
Beisson, E. (Morgan-Brown), 3873, Dec. 20, Railways.
Belford, J. R., 3533, Nov. 25, Manuring, disinfecting and [deodorizing]
Bélicard, J., 1674, June 3, Looms.
Bell, A., & Walker, J., 502, Feb. 16, Distilling, brewing, &c.
 — A. G., 362, Feb. 5, Galvanic belts.
Bell, G. C. (Lake), 2130, July 15, Screw bolt.
 — G. C. (Lake), 2131, July 15, Bolts, rivets & spikes.
Bell, James, 383, Feb. 6, Shedding motion for looms.
 — John, & T., 1073, Apr. 11, Discharging retorts.
 — R. & T., 3581, Nov. 28, Oil lamps.
 — T. & J., 1073, Apr. 11, Discharging retorts.
 — T. & R., 3581, Nov. 28, Oil lamps.
Belleville, J. F., 3284, Nov. 5, Steam boilers and furnaces.
Bellotti, S., & Petvini, R. (Henry), 2794, Sep. 20, Pro- [pelling ships]
Benardaki, N. (Lake), 3086, Oct. 18, Areometrical [balance]
Bender, —, & Huppe, — (Pfeiffer), 3482, Nov. 21, Lock [for bags, &c.]
Benderitter, E. A., & Canu, A. G., 2666, Sep. 9, Calendars.
Bending, J., 1299, Apr. 30, Producing vapours for medici- [nal purposes]
Bennett, E. S. (Mills), 2283, July 30, Rotary engines and [pumps]
Bennett, S., 1050, Apr. 9, Cocks or valves.
 — W., 3271, Nov. 4, Adjusting, reducing, &c. pres- [sures]
Bennett, W. A., Carman, A. B., & Grosfeld, P. (Lake), [2818, Sep. 24, Sewing machine attachment]
Bennett, W. B. G., & Watt, J. C., 2276, July 30, Asphalt.
 — W. H. (Wilson), 2101, July 12, Lighting and [extinguishing lamps, &c.]
Benquet, B. V., 3546, Nov. 26, Motive-power.
Benson, M. (Cope & Maxwell), 104, Jan. 13, Steam-engines.
 — M. (Honell), 799, Mar. 16, Washing, &c. oils.
 — M. (Hayes), 802, Mar. 16, Brine heaters, pans, &c.
 — M. (Lewis & Way), 1258, Apr. 27, Stockings for [horses]
 — M. (Howes, Babcock, Babcock & Ewell), 2192, [July 23, Combined smut machine and grain [separators]
 — M. (Cope & Maxwell), 3617, Dec. 2, Cylinders [and valves of steam-engines]
 — M. (Irwin), 3695, Dec. 6, Tubular lamps.
 — M. (Huntly, Holcomb, & Heine), 3705, Dec. 7, [Cleaning middling]
 — W., 863, Mar. 21, Cutting coal.
 — W., & Hetherington, J. J., 972, Apr. 3, Washing, [&c. orcs.]
Bentall, E. H., 3298, Nov. 6, Steam-boilers.
Bentley, D., & Jackson, J. B., 1846, May 3, Machine [cylinders or drums]
Benton, E. F. (Lake), 157, Jan. 18, Bronzing machines.
Bergehausen, B., Philipps, J., & Kiesling, L. (Eagles), [1263, Apr. 27, Heating rooms, carriages, &c.]
Bergmann, J. J., & Hüttemeier, C. E. (Browne), 1052, [Apr. 9, Glove sewing-machine]
Bergner, T. (Johnson), 2585, Aug. 30, Parallel rulers.
Bernard, A. J., 2968, Oct. 9, Lamps.

Bernhardt, G., 2436, Aug. 15, Carding engines.
 Berry, F. & W. H., 2345, Aug. 7, Bending metals.
 — J., 2665, Sep. 9, Peat fuel.
 — W. H. & F., 2345, Aug. 7, Bending metals.
 — Z. D., 1497, May 16, Stoves.
 — Z. D., 1498, May 16, Stove-grates.
 Bertieaux, H., 226, Jan. 24, Steam-engines.
 Bertin, G., Thwaites, W., & Fondeville, E., 2003, July 2,
 [Glaze or coating for stone.
 — G., Thwaites, W., & Fondeville, E., 2004, July 2,
 [Composition for preserving walls, &c.
 Bessemer, H., 2897, Oct. 1, Passenger vessels.
 Best, R. S., 3687, Dec. 5, Phosphates of soda, &c., chloride
 [of ammonium, manures, &c.
 Beswick, J., & Potts, T., 66, Jan. 8, Tilting barrels, &c.
 Bethell, H., 3080, Oct. 18, Treating beer.
 Bethune, Sir J., 2030, July 5, Traction engine wheels.
 Betteley, J., 1096, Apr. 12, Ships or vessels.
 Betts, W., 354, Feb. 3, Capsules.
 — W., 355, Feb. 3, Capsuling bottles, &c.
 — W., 3587, Nov. 28, Capsules.
 Beven, T., 119, Jan. 15, Uniting looped fabrics.
 Beveridge, A. (Jurgens), 943, Mar. 30, Treating animal fats.
 Bewley, R., 3363, Nov. 12, Boiler fittings, &c.
 Bewsher, J., 1981, July 1, Window-sash fastenings.
 Bezzer, H., 3565, Nov. 27, Registering apparatus for
 [vehicles.
 — H., & Millar, A., 3114, Oct. 22, Registering ap-
 [paratus for vehicles.
 Bibby, W., Fleming, A., & Rawcliffe, J., 841, Mar. 20,
 [Spinning mules.
 Bickeloux, L. (Hughes), 1598, May 25, Furnaces.
 Bickford, D. (Clark), 608, Feb. 26, Knitting machines.
 Bickford, N., 3017, Oct. 14, Soap.
 Bidder, J., Lamb, A. C. L., & Scrivener, W. C., 2149,
 [July 17, Clasp for necklaces and wearing apparel.
 Bigelow, H. B., & Hogel, H. A. (Tongue), 2115, July 13,
 [Manures.
 Bigg, E. S., & Hunt, W. F., 2795, Sep. 20, Plaited paper
 [cups, &c.
 Biggs, B., & Hills, E., 3464, Nov. 20, Treating sewage, &c.
 Biggs, U. F. (Lake), 1019, Apr. 5, Theodolites.
 Bigourat, J., & Gouéry, J. F. (Henry), 2169, July 19,
 [Measuring and indicating time.
 Billing, C. E., 391, Feb. 7, Heating by gas.
 Billington, T., 197, Jan. 22, Mules for spinning.
 Binns, J. P., & Shackleton, J., 1599, May 25, "Tying-
 [in" warps.
 — L., 3238, Nov. 1, Endless bands, corps, or ropes.
 Birch, J., 1770, June 12, Iron and steel.
 — W., 1879, June 21, Substitute for whalebone, &c.
 — W., 3503, Nov. 22, Treating horny substances.
 Bird, J., 2558, Aug. 28, Heating sheds for drying bricks, &c.
 — M., & Fanshawe, H. R., 1323, May 2, Cigars,
 [cheroots, &c.
 Birdsall, R., 382, Feb. 6, Ornamenting book covers, &c.
 Birkinshaw, W. K., 1991, July 2, Cutting coal.
 Bisschop, A. de (Newton), 1594, May 25, Caloric engines.
 Black, J., 2751, Sept. 17, Lining pasteboard, &c.
 Blackburn, A. B., 3253, Nov. 2, Heating and lighting.
 — R., 671, Mar. 5, Treating sewage.
 — W., 645, Mar. 1, School seats, desks, &c.
 Blackham, J. J., 2421, Aug. 14, Gas stoves.
 Blackman, A. L. (Lake), 2906, Oct. 2, Wheels.
 Blackmore, C., 2505, Aug. 23, Ornamenting surfaces.
 Blackwood, Sir J., 1440, May 11, Signal lanterns.
 Blair, J. (Caspersen), 28, Jan. 4, Steam-engines.
 Blair, R., 2140, July 17, Axles and axle-boxes.
 Blair, T. S. (Imray), 1589, May 24, Iron and steel.
 — T. S. (Imray), 1795, June 14, Iron and steel.
 Blake, J. A., Richardson, F., & Hacker, F. (Lake), 1175,
 [Apr. 19, Filling metallic boot heel shells.

Blake, L. R. (Lake), 264, Jan. 26, Boots and shoes.
 Blake, W. E., 2224, July 25, Fire-arms.
 Blakemore, R., & Prince, T. T., 928, Mar. 27, Horse
 [shoes and nails.
 Blakey, J., 3267, Nov. 4, Boots and shoes.
 Blamires, H. & T. H., & Marsden, H., 708, Mar. 7,
 [Carding engines.
 — T. H., 1294, Apr. 30, Spinning or twisting.
 — T. H. & H., & Marsden, H., 708, Mar. 7,
 [Carding engines.
 Blanc, J. A. le, & Vincent, A. J. (Brewer), 2925, Oct. 3,
 [Stamping rivets, bolts, &c.
 Blanchard, L. H., Bang, I. & Provost, L. L. H. (Clark),
 [388, Feb. 6, Treating sewage, &c.
 — L. H. (Clark), 2265, July 29, Phosphoric
 [acid, &c.
 Bleckly, J. J., 847, Mar. 20, Rolling metals.
 Blecker, W. E. (Bousfield), 1873, June 21, Ploughs.
 Blessing, J. H., Townsend, F., & Jackson, G. P.
 [(Edwards), 1139, Apr. 17, Steam-traps.
 Bloch, A. B. (Newton), 3155, Oct. 24, Motive-power.
 Blocksage, T., 3431, Nov. 18, Promoting combustion, &c.
 Blogg, C. A., 3489, Nov. 21, Cisterns.
 Blomfield, J., 1762, June 11, Sewing-machines.
 Blondin, F. (Johnson), 103, Jan. 12, Treating, &c., acid
 [gas tars.
 Bloodgood, J. H. (Lake), 2572, Aug. 29, Coating ships'
 [bottoms.
 Blumberg, F. (Greenhill), 152, Jan. 18, Carriages.
 Blundell, G. T., J. W. & T., 607, Feb. 26, Waterclosets.
 — J. W., T. & G. T., 607, Feb. 26, Waterclosets.
 — T., G. T. & J. W., 607, Feb. 26, Waterclosets.
 — W., 353, Feb. 3, Cape, applicable as a bed, &c.
 Blundon, E. H., & Cleaver, S. T., 461, Feb. 14, Cocks
 [or taps.
 Bly, D. (Johnson), 1693, June 5, Applying coloring or
 [mucilaginous solutions.
 Blyth, F. D., & Southby, A. G., 2417, Aug. 14, Pulping
 [wood for paper.
 — T. C., 3423, Nov. 16, Stoves or fireplaces.
 Bobrownicki, A. (Christy), 1327, May 2, Treating am-
 [moniacal liquors.
 Bobrownicki, A., & Christy, T., 1492, May 16, Treating
 [ammoniacal liquors.
 Boby, R., 982, Apr. 3, Cultivator or scarifier.
 Boddy, J. H., & Pickering, J. R., 3618, Dec. 2, Pro-
 [pelling vessels.
 Bodmer, J. Jacques, 2383, Aug. 10, Sharpening knives
 [and tools.
 — J. James, 1080, Apr. 11, Iron and steel.
 — J. James, & L. R., 3557, Nov. 26, Bricks,
 [blocks, &c.
 — L. R., & J. J., 3557, Nov. 26, Bricks, blocks, &c.
 Boeklen, R., 2803, Sep. 23, Rolling screws and rods.
 Boger, W. D., 246, Jan. 25, Pipes for smoking.
 Boggett, W., & Macintosh, J., 137, Jan. 17, India-rubber
 [hollow vessels for various uses.
 — W., & Macintosh, J., 2554, Aug. 28, Life pre-
 [servers, air beds, &c.
 — W., & Macintosh, J., 2947, Oct. 7, Treating and
 [applying animal membranes.
 — W., & Macintosh, J., 3757, Dec. 11, Head pro-
 [tectors.
 Böhringer, J. G., 3639, Dec. 3, Withdrawing gases from
 [mines, &c.
 Bois, A. A., 1703, June 5, Ships or vessels; lading, &c.
 Bois, J. C. du (West), 2410, Aug. 13, Ginning cotton.
 Bolette, J. S. (Mills), 633, Feb. 29, Carding-engines.
 Bolitho, O. G., 592, Feb. 23, Applying railway brakes,
 [and signalling.
 Bolonin, N. (Feldtmann), 1020, Apr. 6, Mandrel.
 Bolt, J., 1651, May 31, Bottle stoppers.

- Bolton, F. J., 3643, Dec. 3, Compounds for coating [leather.
 — G. H., 3240, Nov. 1, Economizing heat of fur-
 [naces, &c.
 Bond, R. S., 2566, Aug. 28, Perforating or marking
 [papers, &c.
 Bonnardot, A., & Perron, F., 2871, Sep. 30, Boots and
 [guiters.
 Bonneville, H. A. (*De Mestre*), 174, Jan. 19, Securing
 [corks in bottles.
 — H. A. (*Furon*), 237, Jan. 24, Forge bellows.
 — H. A. (*Le Clercq*), 238, Jan. 24, Copying
 [presses.
 — H. A. (*Gapiand*), 245, Jan. 25, Gas.
 — H. A. (*Allen & Dewey*), 375, Feb. 5,
 [Lighting gas,
 — H. A. (*Beckman-Olofson*), 376, Feb. 5,
 [Drinks.
 — H. A. (*Thomas-Payen & Roux*), 1046, Apr. 9,
 [Treating metals or ores.
 — H. A. (*Martin*), 1078, Apr. 11, Spinning.
 — H. A. (*Charton*), 1079, Apr. 11, Imitation
 [tapestry.
 — H. A. (*Guche*), 1290, Apr. 30, Medical
 [injecting or irrigating apparatus.
 — H. A. (*Cavalerie*), 1478, May 15, Motive-
 [power.
 — H. A. (*Foubert*), 1479, May 15, Two-
 [wheeled vehicles.
 — H. A. (*De Massas*), 1552, May 21, Treating
 [cotton seeds.
 — H. A. (*Sprent & Rostaing*), 1785, June 13,
 [Securing corks in bottles.
 — H. A. (*Fabre*), 2077, July 10, Bits.
 — H. A. (*Charton*), 2133, July 16, Tapestry.
 — H. A. (*De Mestre*), 2211, July 25, Wire
 [coverings for securing corks in bottles.
 — H. A. (*Levallois*), 2389, Aug. 10, Steel.
 — H. A. (*Warth & Jobbins*), 2517, Aug. 24,
 [Cutting textile materials.
 — H. A. (*Wightman*), 2553, Aug. 28, Peram-
 [bulators.
 — H. A. (*Baville*), 2640, Sep. 5, Tool holders.
 — H. A. (*Mehu*), 2911, Oct. 3, Lashing for
 [ships' stays.
 — H. A. (*Avril*), 3317, Nov. 8, Furnaces.
 — H. A. (*Martin*), 3653, Dec. 4, Spinning.
 Bonzano, A., Griffen, J., & Clarke, T. C. (Johnson),
 [2701, Sep. 11, Bridges and viaducts.
 Boomer, G. B., (Haseltine), 3510, Nov. 23, Lever and
 [screw press.
 Boone, J. L., & Herman, R., 1590, May 24, Permanent
 [way of railways, &c.
 Booroff, A. F. (Abel), 3788, Dec. 13, Conveying sewage
 [from cesspools, &c.
 Booth, G., 3675, Dec. 5, Sickles.
 — H., 3106, Oct. 22, Looms.
 — J., 188, Jan. 20, Twist lace fabrics.
 Borthwick, J., 3864, Dec. 20, Worms for worm-wheels.
 Borwick, A., & Gibbs, W. A., 314, Jan. 31, Drying substances.
 Bossé, H. C. (*Viger*), 243, Jan. 25, Cast steel.
 Bosshard, H., & Martin, L. (Gilbec), 3191, Oct. 28,
 [Governors.
 Bostel, D. T., 269, Jan. 27, Dry earth-closets & urinals.
 Bottomley, H., 428, Feb. 10, Doubling yarns.
 Boughton, G. A., Newton, I. E., & Stever, J. (Hughes),
 [2688, Sep. 11, Driving loom shuttles.
 Boullier, C., 1641, May 30, Labels for stuffs, &c.
 Bourdin, M. E. (Henry), 2903, Oct. 2, Sewing-machines.
 Bourne, S., 3471, Nov. 20, Screw bolts and nuts, &c.
 Bourne, T. (Madden), 118, Jan. 15, Cotton gins.
 Bousfield, E. T., & Howard, J., 889, Mar. 23, Ploughs, &c.
 Bousfield, E. T., & Howard, J., 905, Mar. 25, Steam-
 [boilers.
 — E. T., & Howard, J., 1405, May 8, Ploughs, &c.
 — E. T., & Howard, J., 3516, Nov. 23, Steam
 [cultivating.
 — G. T. (*House*), 710, Mar. 8, Sewing-machines.
 — G. T. (*Herrick*), 1016, Apr. 5, Machine treadles.
 — G. T. (*Post*), 1422, May 10, Puddling and
 [melting iron.
 — G. T. (*Heaton*), 1591, May 25, Combination
 [tool.
 — G. T. (*Bleeker*), 1873, June 21, Ploughs.
 — G. T. (*Wilson*), 2263, July 29, Furnaces.
 — G. T. (*Heaton*), 2707, Sep. 12, Lacing wearing
 [apparel, &c.
 — G. T. (*Lewis*), 3415, Nov. 15, Cutting and
 [polishing.
 — G. T. (*Scowden*), 3968, Dec. 31, Steel.
 Bouthéon, F. (Clark), 1854, June 19, Camp kettle.
 Bouterin, C. F., 3573, Nov. 27, Winding up weft, twist, &c.
 Bow, W., & Fair, W., 2817, Sep. 24, Steering ships.
 Bowden, G., 1493, May 16, Writing and drawing slates.
 Bowlas, T., 3325, Nov. 9, Damping yarn in spinning, &c.
 Box, J., 282, Jan. 30, Peat-fuel, and peat-charcoal.
 — W. W., 1309, May 1, Gas.
 — W. W., 2542, Aug. 27, Gas.
 Boyd, J., 2986, Oct. 10, Winding or doubling yarns.
 — J., & Henderson, W., 261, Jan. 26, Weaving hair
 [cloth.
 — R. (*Wallace*), 1830, June 18, Projectiles.
 Boyden, W. A., 2304, Aug. 1, Railway axle-boxes.
 Boyes, E., 3099, Oct. 19, Roasting & cooling coffee, &c.
 Boyle, H., 2875, Sep. 30, Heating and regulating heat.
 — H., 2876, Sep. 30, Hatching eggs.
 — R., 1296, Apr. 30, Ventilators & smoke extractors.
 Boyman, R. B., 3840, Dec. 18, Constructing ships.
 Boynton, E. M., (Clark), 635, Feb. 29, Saws.
 Boynton, L. W., 2924, Oct. 3, Blocks of coal, sugar, &c.
 Bracewell, J. & W., & Riley, E., 185, Jan. 20, Distribu-
 [ting manure.
 — W. & J., & Riley, E., 185, Jan. 20, Distribu-
 [ting manure.
 Bradburn, W., 159, Jan. 18, Annealing cast iron.
 — W., 210, Jan. 23, Applying gases, &c. from
 [burning pyrites.
 Bradbury, G. F., Chadwick, T., & Lomax, H. & J., 1370,
 [May 6, Sewing machines.
 Bradford, H. C. (Lake), 856, Mar. 21, Securing lacing
 [hooks in leather, &c.
 Bradford, T., 763, Mar. 13, Mangling, calendering, &c.
 [fabrics.
 Bradley, C., & Waring, W. & F., 678, Mar. 5, Combing
 [fibres.
 — C., Smith, B., Stake, J., Tolson, R., & Firth, M.,
 [700, Mar. 7, Combing fibres.
 Bradley, C. C. (Haseltine), 3910, Dec. 34, Trip hammers.
 Bradley, L. 1307, May 1, Cement.
 — L., & Speight, J., 2143, July 17, Forming roads.
 Bradshaw, A., 3084, Oct. 18, Reducing valves.
 — W., & Wallis, A. G., 594, Feb. 24, Cocoa fibre
 [mats.
 Braendlin, F. A., 3257, Nov. 2, Fire-arms.
 Brakell, C., 2256, July 29, Ballot box.
 — C., 2956, Oct. 8, Drying peat, &c.; peat fuel.
 Brand C. C. (Johnson), 2433, Aug. 15, Propelling boats.
 Brandauer, C. H. E., 631, Feb. 29, Metallic pens.
 Brandon, A. H. (*De Gonzalo & Grisei*), 82, Jan. 10,
 [Treating the tipha latifolia for upholstery, &c.
 — A. H. (*Weed*), 628, Feb. 28, Cutting files.
 Brash, P., & Young, R., 2823, Sep. 24, Lime kilns.
 — P., Scott, A., & Young, W., 2487, Aug. 21, Pro-
 [ducing gas and oil from coal, &c.

- Bray, C., 2110, July 12, Hair restorer.
 — G., 2335, Aug. 6 Gas-burners.
 Bray, W. (Hunt), 2406, Aug. 13, Refrigerating.
 Brayton, G. B. (Lake), 432, Feb. 10, Gas engines.
 Brearley, T., 726, Mar. 9, Finishing textile fabrics.
 Breavington, W. G. K., & Isaacs, T. I., 1301, Apr. 30, [Organs.
 Breckner, A., & Heyl, H. R. (Mills), 2291, July 31, Match [boxes, &c.
 Bretherick, J. W., 1792, June 14, Sizing, &c. beads.
 Brewer, E. G. (Goubet), 898, Mar. 25, Studs or buttons.
 — E. G. (Frye), 1011, Apr. 5, Railways & rolling stock.
 — E. G. (Baker), 1055, Apr. 10, Tuyeres.
 — E. G. (Bazault & Roche), 1466, May 14, Steel, &c.
 — E. G. (Appleton), 1546, May 21, Stockings.
 — E. G. (Lowden), 1924, June 25, Operating sewing [machines, &c.
 — E. G. (Jouvin, Doyon & Co.), 2804, Sep. 23, Gloves.
 — E. G. (Segoffin), 2900, Oct. 2, Studs or buttons.
 — E. G. (Le Blanc & Vincent), 2925, Oct. 3, Stamp- [ing rivets, bolts, &c.
 Brierley, M., & Stott, F. L., 709, Mar. 8, Yarns or threads.
 Brierly, J. & J. (Lake), 219, Jan. 23, Changing shuttle [boxes.
 Briggs, H. C., & Ramsay, D. R., 1184, Apr. 20, Steam [generator, &c. for puddling furnaces.
 — Jeremiah, 1343, May 3, Ballot voting.
 Briggs, Johnson (Lake), 2741, Sep. 14, Chimneys and [fireplaces.
 Briggs, Joseph G., 1429, May 10, Stereotypes.
 Brightman, J. W., & Taylor, N. W. (Lake), 968, Apr. 2, [Paper rag-engines.
 Brimelow, P., 3353, Nov. 11, Warping or beaming.
 — P., & Sutherst, S., 3357, Nov. 12, Railway [couplings.
 Brindle, W. (Lake), 1666, June 1, Spark arresters.
 Brittin, J. W., & Tatham, B. (Eddison), 2174, July 20, [Platform lifts.
 Broadbent, J. K., 2601, Sep. 2, Steam-boiler furnaces.
 Broadwell, L. W., & Michaels, J. P. (Smith), 469, [Feb. 14, Retarding railway trains.
 — L. W., & Michaels, J. P. (Smith), 477, [Feb. 15, Railway carriages.
 — L. W., & Baranovsky, W. (Smith), 3186, [Oct. 26, Machine guns, frames & cartridge cases.
 Brocklehurst, G., & Fletcher, G., 326, Feb. 1, Sugar.
 Brocklehurst, J., & Crossley, J., 3688, Dec. 6, Stench traps.
 Brockmann, L., & O'Ryan, D. (Imray), 1489, May 16, [Means of transit across rivers, &c.
 Brode, J. & L. A., 804, Mar. 16, Substitute for wood, mill- [board, &c.
 — L. A. & J., 804, Mar. 16, Substitute for wood, mill- [board, &c.
 Brodie, J., 2472, Aug. 20, Fastenings for gates & doors, &c.
 Broel, J., 1158, Apr. 18, Lighting and heating.
 Broly, W. S. (Sullivan), 881, Mar. 22, Combination locks.
 Brook, E., 1399, May 7, Applying labels to bobbins, &c.
 Brooke, S., 1160, Apr. 18, Carding engines.
 — S., 2958, Oct. 8, Carding engines.
 Brookes, A. G. (Hoevelmann), 3700, Dec. 6, Motive-power.
 — W. (Farjon), 1355, May 4, Communicating [motion & pressure to presses, valves, vices, &c.
 — W. (Augsburger Kammgarnspinnerei), 2498, [Aug. 22, Stop-motion for spinning apparatus, &c.
 — W. (Heusser), 3181, Oct. 26, Ordnance.
 — W. (Farjon), 3490, Nov. 21, Joining pipes.
 Brooks, E., 2146, July 17, Brooms and brushes.
 — E., & Shutt, T., 3351, Nov. 11, Economizing fuel.
 — H. (Ulmann), 3314, Nov. 8, Music stools, seats, &c.
 Brooks, J. W. (Morgan-Brown), 2736, Sep. 14, Boots and [shoes.
 Brooks, Thomas, 1571, May 23, Steel.
 Brooks, Thomas (Jensen), 3477, Nov. 21, Steel.
 — Timothy (Lake), 2425, Aug. 14, Distilling and [steaming apparatus.
 Broom, W., Bruce, G. C., & Wright, W. L. G., 654, Mar. 2, [Motive-power engines, &c.
 Brosse, J. F. (Helie), 882, Mar. 22, Bottling cider.
 Brough, N., & Rollason, W., 172, Jan. 19, Boxes for [matches, &c.
 — R., 363, Feb. 5, Governors and speed regulators.
 Broughton, T., 669, Mar. 5, Foundations of buildings.
 — T., 2380, Aug. 9, Girders, &c. for building.
 — T., 2438, Aug. 15, Roofs, &c. of buildings.
 — W., 1221, Apr. 24, Communicating in trains.
 Brower, B., 2135, July 16, Card holders.
 Brown, A., & Simons, W., 494, Feb. 16, Steam dredgers.
 — A. B., 3816, Dec. 17, Hydraulic engines.
 — B., 3390, Nov. 14, Spindle bolsters.
 — B. & J., 3896, Dec. 23, Hand signal lamps, &c.
 Brown, D. C., & Barlow, H. B., 781, Mar. 14, Hcalds for [weaving.
 Brown, D. S., 411, Feb. 8, Aërial machine.
 — H. E., 2866, Sep. 28, Carriage door locks.
 — H. L., & Elman, S., 24, Jan. 3, Cigars.
 — L., 1393, May 7, Phosphate of alumina.
 — L., 1511, May 17, Watering streets.
 — L., 2279, July 30, Sewage and manure.
 — L., 3664, Dec. 4, Sheep and cattle hurdles.
 — John, & B., 3896, Dec. 23, Hand signal lamps, &c.
 — John, Skinner, J. A., & Vine, J. & J., 2010, [July 3, Fire-arms.
 — John H., 1704, June 5, Securing corks in bottles, &c.
 — Joseph, 1671, June 3, Gas meters.
 — Joseph S., 874, Mar. 22, Raising liquids.
 — Richard, 3225, Oct. 31, Preventing draught in [chimneys.
 — Robert, 105, Jan. 13, Ventilating stove.
 — S. S., & Ayrton, F., 598, Feb. 24, Looms.
 — T., 3500, Nov. 22, Wheel tyres; hoops and rings.
 — T. (Colladon), 3126, Oct. 23, Compressing air and [gas; pistons, &c.
 — T. C., & Head, J., 3197, Oct. 28, Steam engines [for burning straw, &c.
 — W., 2317, Aug. 3, Tilting casks and barrels.
 — W. D., 1858, June 20, Reaping machines.
 — W. Morgan- (Fuller), 950, Mar. 30, Horse-shoe [nails, &c.
 — W. Morgan- (Goulding), 1270, Apr. 27, Steam- [generators.
 — W. Morgan- (Cottle), 1350, May 3, Centrifugal [machines.
 — W. Morgan- (Jarrossoy & Pack), 1710, June 6, [Dyeing.
 — W. Morgan- (Lambert), 1859, June 20, Boots & [shoes.
 — W. Morgan- (Ehert & Pack), 1880, June 22, [Ammonia.
 — W. Morgan- (Fuller), 1977, July 1, Horse-shoe [nails.
 — W. Morgan- (Gallaher), 2064, July 9, Type [wheels for printing telegraphs.
 — W. Morgan- (Gallaher), 2073, July 10, Tele- [graph printing instruments.
 — W. Morgan- (Wessman), 2081, July 10, Unison [stop for printing telegraphs.
 — W. Morgan- (Houghton), 2268, July 30, Raising [water.
 — W. Morgan- (Fuller), 2432, Aug. 15, Horse-shoe [nails.
 — W. Morgan- (Dodge), 2464, Aug. 19, Splitting [leather.
 — W. Morgan- (Ashe), 2706, Sep. 12, Sewing-ma- [chines.

- Brown, W. Morgan- (*Keith*), 2735, Sep. 14, Attaching [buttons].
 — W. Morgan- (*Brooks*), 2736, Sep. 14, Boots & [shoes].
 — W. Morgan- (*Rowe*), 2739, Sep. 14, Telegraphs.
 — W. Morgan- (*Hotchkiss*), 3065, Oct. 17, Ordnance and cartridges.
 — W. Morgan- (*Möller*), 3067, Oct. 17, Composition for preserving, wood, &c.
 — W. Morgan- (*Dunham*), 3213, Oct. 30, Oakum.
 — W. Morgan- (*Amberg*), 3220, Oct. 31, Self-indexing holder, file, & binder for letters, &c.
 — W. Morgan- (*Schultz*), 3614, Nov. 30, Fastening stays.
 — W. Morgan- (*Brunt*), 3731, Dec. 9, Chimney cowl.
 — W. Morgan- (*Beason*), 3873, Dec. 20, Railways.
 Browne, A. (*Count of Montebello*), 510, Feb. 17, Treating &c. vegetable fibres.
 — A. (*Nörholm*), 749, Mar. 11, Sewing gloves.
 — A. (*Bergmann & Hüttemeier*), 1052, Apr. 9, [Glove sewing machine].
 — A. (*Hartley*), 1110, Apr. 13, Lamps.
 — A. (*Storch, Hentsch, Hentsch, Lutscher, & Gringer*), 2286, July 30, Treating phosphates, &c.
 — A. (*Knapp*), 3686, Dec. 5, Raising vessels.
 — J. C., 1419, May 9, Vessels and boats.
 — J. C., & Davenport, M., 3144, Oct. 24, Buildings [&c. for storing explosives].
 — R. A., 758, Mar. 12, Poaching eggs, &c.
 — R. A., 1543, May 21, Cooking utensils.
 Brownhill, J., & Salmon, J., 2105, July 12, Bronzing [paper, &c].
 Browning, J., 1789, June 13, Photometers.
 — T., 3006, Oct. 11, Washing & drying apparatus.
 Bruce, G. C., & Porteous, A. N., 1645, May 30, Lamps.
 — G. C., Wright, W. L. G., & Broom, W., 654, [Mar. 2, Motive-power engines, &c].
 — W., & Foureur, H., 3631, Dec. 3, Bottles.
 Bruen, L. B. (*Lake*), 1584, May 23, Propelling vessels.
 — L. B. (*Lake*), 2836, Sep. 25, Reaping-machine [rake].
 Bruerton, G., & Clark, C. F., 1713, June 6, Coffee mills.
 Brunel, L. (*Gedge*), 1985, July 1, Shaping boots.
 Brunet, J. M. (*Robbe*), 2941, Oct. 5, Curing cattle disease.
 — *Magnier, Pouilly & Co., & Prévost, G. (Johnson)*, [3196, Oct. 28, Spinning fibres].
 Brüning, A., Meister, W., & Lucius, E., 2649, Sep. 6, [Colouring matter for dyeing, &c].
 Brunner, W. G. (*Schulz & Heyl*), 3470, Nov. 20, Annealing, &c., metals.
 Brunskill, W., 3037, July 5, Forming bungs, &c.
 Brunt, J. (*Morgan-Brown*), 3731, Dec. 9, Chimney cowl.
 Bryant, W., 2896, Oct. 1, Match splints.
 Bryce, A., 2548, Aug. 27, Branding casks, barrels, &c.
 Brydges, C. J., *Kerr, W. H., Duncan, A. R., & Macnaughton, J.*, 1137, Apr. 17, Fire arms.
 Brydon, R., Davidson, J. S., & Warrington, T. A., 3507, [Nov. 23, Boring rock, &c].
 — R., Davidson, J. S., & Warrington, T. A., 3921, [Dec. 26, Drilling rock &c].
 Buchanan, James, 3376, Nov. 13, Drying and cleaning [machines].
 — James, & Anderson, G., 1768, June 12, Drawing retorts.
 — John, 2957, Oct. 8, Propelling ships.
 Buckholz, G. A., & Eiben, F. T. T., 3908, Dec. 24, [Motive-power].
 Buckland, T. A., & Thornton, W. McK. (*Edwards*), 495, [Feb. 16, Dust shield for railway carriages].
 Buckley, R., & Dodd, J., 3569, Nov. 27, Spinning mules.
 Budenberg, A. (*Schäffer & Budenberg*), 95, Jan. 11, [Liquid-meters].
 Budenberg, A. (*Priew*), 235, Jan. 24, Refining sugar.
 — A. (*Schäffer & Budenberg*), 860, Mar. 21, [Pulley blocks].
 Budenberg, C. F., & Schäffer, C. F. (*Budenberg*), 95, [Jan. 11, Liquid-meters].
 — C. F., & Schäffer, B. A. (*Budenberg*), 860, [Mar. 21, Pulley blocks].
 Bull, W., 1845, June 19, Salt.
 Bullough, J., 3085, Oct. 18, Obtaining and circulating [heat for sizing, &c].
 — J., 3770, Dec. 12, Sizing, &c. yarn; utilizing [waste heat].
 — J., 3963, Dec. 31, Safety and relief valves.
 — J., & Lancaster, W., 683, Mar. 6, Sizing and [dressing yarns].
 — J., & Leachman, J., 3774, Dec. 12, Preparing [and spinning fibres].
 Bulmer, H., & Sheppard, C. (*Clark*), 3935, Dec. 27, [Brick machines].
 Burchfield, T. J., & Rogers, W. (*Lake*), 1574, May 23, [Sheet-iron].
 Burge, G., 1877, June 21, Kilns.
 Burgess, A. (*Clark*), 263, Jan. 26, Fire-arms.
 — A. (*Clark*), 2354, Aug. 7, Fire-arms & cartridges.
 Burgess, E., 358, Feb. 3, Treating, &c., lyes used in [paper-making].
 — F., & Robertshaw, J., 3582, Nov. 25, Spinning [and twisting fibres].
 Burke, M., 1909, June 24, Screw propellers.
 Burleigh, B., 1891, June 22, Railway switches.
 Burn, R., 440, Feb. 12, Signalling on railways.
 — R., & Howard, J., 3592, Nov. 29, Railway crossings.
 Burnie, J., 2853, Sep. 27, Portable fencing.
 Burr, D. A. (*Prall*), 253, Jan. 25, Diaphragm motors.
 Burrell, C., & Pullin, T. J., 3713, Dec. 7, Carts.
 Burrow, J. S. & W. B., 1846, June 19, Bin for bottles.
 — W. B. & J. S., 1846, June 19, Bin for bottles.
 Burrows, W., 2120, July 13, Mincing machines.
 Burstow, E., 1622, May 29, Window-sash fastener.
 — E., 3589, Nov. 29, Window-sash fastener.
 — E., 3948, Dec. 30, Spring, &c. for roller blinds.
 Burt, J. (*Burt*), 26, Jan. 4, Floating dredgers.
 Burt, J. U., 3265, Nov. 4, Opening and closing carriages.
 — T. (*Burt*), 26, Jan. 4, Floating dredgers.
 Burton, G. S., 3276, Nov. 5, Pincushions.
 Bury, W. T., 2816, Sep. 24, Covers for furnaces.
 Busby, A. G., & Woodbury, W. B. (*Davies*), 1186, [Apr. 20, Stereopticons].
 Busby, E., 2557, Aug. 28, Respirators.
 — W., & Griffiths, R., 3089, Oct. 19, Indicating apparatus for public vehicles.
 Butchart, W. P., 934, Mar. 28, Treating fibres.
 Butel, A., Pollard, J. W., & Schofield, J., 2630, Sep. 4, [Treating oxides of iron].
 Butler, J. G., 1510, May 17, Projectiles.
 — J. W., & Milroy, J., 879, Mar. 22, Coffor dams.
 Buttery, W., Bates, J., & Dixon, J. W., 3556, Nov. 26, [Extracting caps from cartridge cases].
 Buzby, A. G. (*Johnson*), 419, Feb. 9, Steam-generators.
 Byers, J. J. (*Clark*), 2546, Aug. 27, Fire-arms.
 Bytheway, H., 1182, Apr. 20, Annealing boxes, &c., for [tin works].
 Bywater, W., 3604, Nov. 30, Drawing and spinning fibres.

C.

- Cabanes, H. (*Johnson*), 1944, June 27, Sifting or bolting [machines].
 Caffall, R. M., 2622, Sep. 3, Earth-closets.

- Cail, C., 2458, Aug. 17, Paper cutting machine.
 Caillot, E. J. L., 2036, July 5, Gas.
 Cain, E. J., 2859, Sep. 28, Screens with dust-bins.
 Caithness, Earl of, 48, Jan. 5, Cleaning railway carriages.
 Calahan, E. A., 1537, May 20, Telegraphic signalling.
 — E. A., 2327, Aug. 3, Telegraphic instruments.
 Caldwell, J. K. (Johnson), 340, Feb. 2, Burning hydro-
 [carbons].
 Callander, G. F. W., 2122, July 13, Ordnance.
 Callaud, J. A. (Newton), 1025, Apr. 6, Governors.
 — J. A. (Newton), 2936, Oct. 4, Governors.
 Calverley, J., & Macdonald, J. C., 3537, Nov. 25, Printing
 [machinery].
 Calvert, J., 1870, June 21, Moulders' lamps.
 — J. C., & Taylor, J., 350, Feb. 3, Heating water,
 [steam, &c].
 Cameron, J., 570, Feb. 22, Plate bending machines.
 — J. G., & Smith, B. T., 3127, Oct. 23, Water-
 [closets].
 Campaign, S. W., Perkins, T., & Faux, E., 728, Mar. 9,
 [Cultivating land].
 Campbell, A. (Lake), 169, Jan. 18, Printing presses.
 Campbell, D., 944, Mar. 30, Treating sewage for manure.
 Campbell, F. W. & Saunders I. (Lake), 1656, May 31,
 [Packing for joints].
 Campbell, J., 1167, Apr. 19, Cleaning, repairing, &c.
 [vessels].
 — J., 1883, June 22, Decreasing rolling of vessels.
 — W., 2910, Oct. 2, Furnaces.
 Campion, G., 2114, July 13, Reaping and mowing.
 — W., 534, Feb. 19, Linking, stitching, &c. fabrics.
 — W., 1818, June 17, Seaming looped fabrics.
 Camroux, M. O., 2708, Sep. 12, Sliding appliance for
 [openings, passages, &c].
 — S. G., 3950, Dec. 30, Receptacles for heating.
 Camus, E. (Gedge), 3902, Dec. 24, Drawing board.
 Canfield, F. A. (Clark), 1834, June 18, Railway brakes.
 Canu, A. G., & Benderitter, E. A., 2666, Sep. 9, Calendars.
 Capel, C. C., 3168, Oct. 25, Stench traps.
 — G. B., 2932, Oct. 4, Fitting ships.
 Capitaine, F., Holzmänn, P., & Barthel, P. (Prince),
 [3886, Dec. 21, Asphalt for paving].
 Caratti, V., & Church, S. K., 954, Mar. 30, Generating
 [hydrogen].
 Cardailhac, P., & Hadley, S. H., 2365, Aug. 8, Cleaning
 [wheat, &c].
 Cardoso, H. G., & Taylor, A. W., 866, Mar. 22, Checking
 [receipt of money].
 Carey, R., 1687, June 4, Rotary pumps and fluid meters.
 Carlile, T., & Stevenson, J. & J., 1695, June 5, Soda and
 [potash].
 — W., 71, Jan. 9, Hatbands, muffs, cuffs, &c.
 Carman, A. B., Grosfeld, P., & Bennett, W. A. (Lake),
 [2818, Sep. 24, Sewing-machine attachment].
 Carpenter, J. M. (Laycock), 3226, Oct. 31, Cutting
 [screws].
 Carr, D. A., & Barlow, C. P., 1520, May 18, Railway
 [signalling].
 — M., 470, Feb. 14, Dry earth-closets.
 — W., 858, Mar. 21, Spindles and shuttles.
 Carrao, C. G. (Taber), 1133, Apr. 16, Artificial breasts.
 Carrington, W. E., 681, Mar. 5, Felt hats.
 Carson, W. H., & Toone, J. V., 665, Mar. 4, Chaff cutting
 [machines].
 Carter, D., 465, Feb. 14, Dry earth-closets.
 — G. H., 328, Feb. 1, Converting reciprocating into
 [rotary motion].
 — G. H., 1359, May 4, Gas stoves.
 Carter, H. (Lake), 992, Apr. 4, Cutting trenches.
 — H. (Lake), 1049, Apr. 9, Ditching or trenching.
 Carter, J. & J. E., 1434, May 11, Casting syphon pipes, &c.
 — J. E. & J. 1434, May 11, Casting syphon pipes, &c.
 Carter, J. H., & Norton, J. L., 1911, June 24, Decorti-
 [cating, &c., grain and seed].
 — J. W., 697, Mar. 7, Marking on linen.
 — Samuel, Palmer, T., & Pickup, A., 2474, Aug. 20,
 [Sewing-machines].
 — Simeon, 2651, Sep. 6, Fuel.
 Carvalho, A. J. P. de, 2808, Sep. 23, Mechanical beams
 [or girders].
 Carwood, W., 2511, Aug. 23, Printing presses.
 — W., 2935, Oct. 4, Embossing & printing presses.
 Casartelli, J. L., 984, Apr. 3, Pyrometers.
 Casbay, J. R., 2093, July 11, Compound for preserving
 [wood, &c].
 Caselton, C., & Toogood, H., 1920, June 25, Saw-frames.
 Caspersen, H. W. (Blair), 28, Jan. 4, Steam-engines.
 Casse, J., & Son (Smith), 1178, Apr. 19, Jacquard ma-
 [chinery].
 Casson, R. S. (Dornoy), 3763, Dec. 11, Furnaces.
 Castle, J., 1968, June 29, Shutters and partitions.
 — J., & Stones, J., 2007, July 3, Revolving shutters
 [and partitions].
 Caswell, W. A. (Lake), 773, Mar. 14, Rolls for spinning.
 Cates, S., & Swindlehurst, W., 1557, May 22, Transfer
 [printing].
 Cathcart, J. L., Ezekiel, M., & Faeltz, E. F. M. (Mills),
 [61, Jan. 8, Hooks].
 Catlow, C., 1159, Apr. 18, Looms.
 — C., & Overton, W., 2326, Aug. 3, Looms.
 Cauderlier, A., & Krieger, A., 3887, Dec. 21, Bottle-stoppers.
 Caumon, C. J. (Lake), 1135, Apr. 17, Iron bars, plates, &c.
 Cavalerie, M. F. D. (Bonneville), 1478, May 15, Motive-
 [power].
 Cavayé, H. C. (Lake), 1586, May 24, Extracting oil
 [from, and grinding maize].
 Cawse, C. H., 2428, Aug. 15, Regulating water supply to
 [closets, &c].
 Cay, W. D., 2471, Aug. 19, Breakwaters, piers, &c.
 Cazes, G., 1252, Apr. 26, Boots and shoes.
 Cazier, J. R., 1941, June 27, Safety valves.
 Chadderton, J., Allmark, J., & Haigh, B., 1262, Apr. 27,
 [Cocks and water gauges].
 Chadwick, E., 589, Feb. 19, Roads and ways; draining.
 — T., Lomax, H. & J., & Bradbury, G. F., 1370,
 [May 6, Sewing-machines].
 Chainé, W., 2486, Aug. 21, Saddle bags for water.
 Chambeaur, P. A. (Gedge), 3605, Nov. 30, Gas cock.
 Chamberlain, O. McC., 1930, June 26, Sewing-machine
 [attachment].
 Chambers, G., 3535, Nov. 25, Boot and shoe heels.
 — J. W., 2103, July 12, Safes, strong rooms, &c.
 — M. & M., 3742, Dec. 10, Sizing woven fabrics.
 Chamblant, P. M. J., 2522, Aug. 24, Sewing machines.
 Chamoulin, L. C. L. (Johnson), 2714, Sep. 13, Portfolio.
 Chancellor, H., 3015, Oct. 12, Hinges & other jointed articles.
 Chandler, James, 2090, July 11, Controlling and pre-
 [venting waste of water].
 — Joseph, S. & S., 1261, Apr. 27, Cleansing water-
 [closets].
 — Josiah, S. & S., 2416, Aug. 14, Dip pipes for
 [hydraulic mains].
 — Josiah, S. & S., 3153, Oct. 24, Gas.
 — S. & J., 1261, Apr. 27, Cleansing water-closets.
 — S., S. & J., 2416, Aug. 14, Dip pipes for hy-
 [draulic mains].
 — S., S. & J., 3153, Oct. 24, Gas.
 Channell, D. B., & others (Edwards), 777, Mar. 14, Dial
 [plates for clocks, &c].
 Chapin, W. B., 1862, June 20, Securing door knobs, &c. to
 [spindles].
 — W. B., 2415, Aug. 13, Railway fish joints.
 — W. B., 2424, Aug. 14, Adjusting spanner.
 — W. B., 2973, Oct. 9, Railway breaks.

- Chapman, A., 2887, Oct. 1, Evaporating cane juice, &c.
 Chappell, G., 2753, Sep. 17, Chaplets for casting pipes, &c.
 Chappuis, P. E., 1899, June 24, Light reflectors.
 Chapusot, F. (Henderson), 926, Mar. 27, Distilling and filtering fecal matters for ammonia, &c.
 Charpentier, P., 1720, June 7, Heating furnaces by gas.
 Charton, E. (Bonneville), 1079, Apr. 11, Imitation tapestry.
 — E. (Bonneville), 2133, July 16, Tapestry.
 Chase, F. T., & Platt, J. H. (Lake), 961, Apr. 1, Preparing fibres for spinning.
 Chase, W. H., 612, Feb. 26, Moving carriages, &c. on [ing railways].
 Chassan, E., & Rault, L., 304, Jan. 31, Printing telegraphs.
 Chateau, J. E. E., & Farcot, J. J. L., M. B. A., & M. J. D. (Newton), 2635, Sep. 4, Regulating speed of engines.
 — J. E. E., & Farcot, M. J. D., J. J. L., & M. B. A. (Newton), 3776, Dec. 12, Governors.
 Chatwood, S., & Collins, J. H., 1954, June 28, Treating ores.
 Chaufourier, J. A. (Clark), 2478, Aug. 20, Cotton gins.
 Chauncy, C. D., 3434, Nov. 18, Cleaning tramway rails.
 Cheesbrough, F. J. (Force & Judson), 1600, May 27, [Oil from seeds].
 — F. J. (Fisher), 1948, June 27, Oil and oil [cake from seeds].
 — F. J. (Clough), 2156, July 18, Evaporating [acids, salts, &c.].
 — F. J. (Fenerty), 3440, Nov. 18, Skate fastening.
 Cheetham, J., Turner, R., & Hibbert, J., 2352, Aug. 7, Hats.
 Cheever, J. C. F. (Spence), 3273, Nov. 4, Anthracene.
 Chenhall, J., 1992, July 2, Sewing-machines.
 Chéradame, A. L., Zarzecki, S. J. I., & Oursel, V. C. J. (Lake), 1667, June 1, Boot & shoe heels.
 — A. L., Le Dreux, A. E., & Oursel, V. C. J. (Lake), 2053, July 6, Ventilating.
 Cherry, H., 2147, July 17, Punching & shearing machines.
 Chevallier, A. (Gedge), 1255, Apr. 26, Draught apparatus [for steam-engines].
 Chiffroy, A., 3545, Nov. 26, Printing & ribbing cloth, &c.
 Chimiques, Société Anonyme des Manufactures des Glaces [et Produits] (Johnson), 2200, July 25, Plate glass.
 Chinnoek, G. H., 3425, Nov. 16, Sheet-metal cans.
 Chiris, L., 3767, Dec. 12, Kneading-trough.
 Chisholm, H. (Lake), 1002, Apr. 5, Utilizing railway rails.
 Choate, S. F. van, 3474, Nov. 21, Telegraphing.
 Chodsko, N. F. B. de, 1823, June 17, Furnaces.
 Christopher, J. S., & Lackersteen, J. F., 1143, Apr. 17, [Propelling vessels].
 — J. S., & Lackersteen, J. F., 1931, June 26, [Hydrogen gas].
 Christy, T. (Bobrownicki), 1327, May 2, Treating ammoniacal liquors of gas works, &c.
 — T. (Tucker), 2455, Aug. 17, Ventilating ships, &c.
 — T., & Bobrownicki, A., 1492, May 16, Treating [ammoniacal liquors].
 Church, S. K., & Caratti, V., 954, Mar. 30, Generating [hydrogen].
 — W. C., 563, Feb. 21, Steam-engines, rams & pumps.
 — W. C., 2469, Aug. 19, Steam and hydraulic engines.
 — W. C., 3395, Nov. 14, Safety and other valves.
 — W. C., 3555, Nov. 26, Safety and other valves.
 Ciacher, D., & Pistor, A. (Hughes), 2422, Aug. 14, Cigars.
 Clachar, R. (McArthur & Kerr), 792, Mar. 15, Bale presses.
 Clague, W. R., Randall, R. B., & Andrews, E. R. (Lake), 855, Mar. 21, Attaching covers to pamphlets.
 Clark, A., 1322, May 2, Revolving shutters.
 — A., 2355, Aug. 7, Revolving shutters.
 — A., 3246, Nov. 1, Revolving shutters.
 — A. M., 2176, July 20, Expansible pivot.
 — A. M. (Klotz & Co. & Meyer), 47, Jan. 5, Neck-ties.
 Clark, A. M. (Weyde), 149, Jan. 17, Coloring photographs, &c.
 — A. M. (Doty, Milmore, Michel & Michel), 220, [Jan. 23, Railway axles and wheels].
 — A. M. (D'Arincourt), 255, Jan. 25, Electro-magnets.
 — A. M. (Burgess), 263, Jan. 26, Fire-arms.
 — A. M. (Susini-Ruiseco), 300, Jan. 31, Cigarettes.
 — A. M. (Blanchard, Bang & Provost), 388, Feb. 6, [Treating sewage, &c.].
 — A. M. (Sheffield & Mellor), 399, Feb. 7, Sewing [leather; thread for same].
 — A. M. (Edge), 414, Feb. 8, Metallic knitted [fabrics, &c.].
 — A. M. (Hédiard), 436, Feb. 10, Propelling vessels.
 — A. M. (Condell), 437, Feb. 10, Propelling vessels.
 — A. M. (Coe), 524, Feb. 17, Railway time signals.
 — A. M. (Bickford), 608, Feb. 26, Knitting machines.
 — A. M. (Wills & Kingsland), 609, Feb. 26, Horse-shoe nails.
 — A. M. (Boynston), 635, Feb. 29, Saws.
 — A. M. (Quinn), 701, Mar. 7, Horse-shoes.
 — A. M. (Lindsley & Bartlett), 702, Mar. 7, Covering [carding rolls, &c.].
 — A. M. (Heilmann), 757, Mar. 12, Changing loom [shuttles].
 — A. M. (Miles), 762, Mar. 13, Battery guns.
 — A. M. (Quaritus), 780, Mar. 14, Lowering and [detaching boats].
 — A. M. (Knowles), 838, Mar. 19, Compound for [cleaning carpets, &c.].
 — A. M. (Floyd, Dieterich & Schüssler), 901, Mar. 25, [Gas retorts].
 — A. M. (Patrick), 902, Mar. 25, Elevators for fire-men, &c.
 — A. M. (Rouillé), 1032, Apr. 6, Gas.
 — A. M. (Short), 1043, Apr. 8, Looms.
 — A. M. (McClintock), 1061, Apr. 10, Postal cards.
 — A. M. (Legat), 1098, Apr. 12, Blocking hats; [regulating pressure of fluids].
 — A. M. (Lewis), 1210, Apr. 23, Motive-power [engines and pumps].
 — A. M. (Larmanjat), 1218, Apr. 23, Hardening [tiles, &c.].
 — A. M. (Bastaert), 1245, Apr. 25, Drying and [bleaching fabrics, &c.].
 — A. M. (Larmanjat), 1246, Apr. 26, Locomotive [engines and carriages; permanent way].
 — A. M. (Massey), 1351, May 3, Rotary engines.
 — A. M. (Minter), 1614, May 28, Engraving, cutting [and carving].
 — A. M. (Huet), 1678, June 3, Eyelets for boots, &c.
 — A. M. (Thomas), 1692, June 4, Bustles.
 — A. M. (Reynolds), 1746, June 10, Steam pumps.
 — A. M. (Stancliff & Floyd), 1747, June 10, Fastening lids of gas retorts.
 — A. M. (Falcimagne), 1748, June 10, Pistons.
 — A. M. (Eggleston), 1749, June 10, Lubricating [axles, &c.].
 — A. M. (Canfield), 1834, June 18, Railway brakes.
 — A. M. (Bouthton), 1854, June 19, Camp kettle.
 — A. M. (Rabien & Wellinshuff), 1913, June 24, [Rudder and drag for vessels].
 — A. M. (Pollock), 1934, June 26, Feeding and [drying white lead, &c.].
 — A. M. (Marinoni), 2041, July 5, Printing.
 — A. M. (Bailey), 2084, July 10, Carpet pads.
 — A. M. (Simons), 2187, July 22, Ornamental tiles.
 — A. M. (Dubois), 2219, July 25, Travelling garment [and holder].
 — A. M. (Blanchard), 2265, July 29, Phosphoric [acid, &c.].

Clark, A. M. (*Gueury & Dubois*), 2281, July 30, Fire-arms.
 — A. M. (*Burgess*), 2354, Aug. 7, Fire-arms and [cartridges].
 — A. M. (*Viard*), 2403, Aug. 12, Medicinal compound.
 — A. M. (*Escher*), 2404, Aug. 13, Looms.
 — A. M. (*Chaufourier*), 2478, Aug. 20, Cotton gins.
 — A. M. (*Byers*), 2546, Aug. 27, Fire-arms.
 — A. M. (*Martinier*), 2633, Sep. 4, Sharpening saws.
 — A. M. (*Cumin & Martel*), 2677, Sep. 9, Casting [metals].
 — A. M. (*De Mories*), 2785, Sep. 19, Propelling vessels.
 — A. M. (*Lindenblith*), 2809, Sep. 23, Elevating [apparatus].
 — A. M. (*Wilson & Folk*), 2882, Sep. 30, Bearings for [spindles, &c.].
 — A. M. (*Vincenzi, Gaillard, Gaillard & Gaillard*), [2898, Oct. 1, Punching jacquard cards].
 — A. M. (*Deiss*), 3323, Nov. 8, Stearic acid.
 — A. M. (*Allen & Ritchel*), 3388, Nov. 13, Bolts and [nuts].
 — A. M. (*Gold*), 3397, Nov. 14, Air-heating furnace.
 — A. M. (*Dederick*), 3398, Nov. 14, Baling press.
 — A. M. (*Ritchel & Allen*), 3399, Nov. 14, Boring [and drilling].
 — A. M. (*Lavater*), 3414, Nov. 15, Moulding india- [rubber, &c.].
 — A. M. (*Aubertin & Hannart*), 3441, Nov. 18, [Walking sticks].
 — A. M. (*Marelli & Marelli*), 3488, Nov. 21, Fire-arms.
 — A. M. (*Assman*), 3571, Nov. 27, Grinding and [polishing].
 — A. M. (*Ford*), 3572, Nov. 27, Printing, pressing [and folding, &c. paper].
 — A. M. (*Wilson & Folk*), 3629, Dec. 2, Spindle [bolsters].
 — A. M. (*Staughton*), 3630, Dec. 2, Joint for railway [rails].
 — A. M. (*Loiseau*), 3813, Dec. 16, Artificial fuel.
 — A. M. (*Parisod & Prochasson*), 3849, Dec. 18, [Calendars].
 — A. M. (*Reilly*), 3856, Dec. 19, Ventilating ships.
 — A. M. (*Dumonthier*), 3917, Dec. 24, Fire-arms.
 — A. M. (*Bulmer & Sheppard*), 3935, Dec. 27, Brick [machines].
 — B., 1260, Apr. 27, Crochet needles.
 — C. F., 3000, Oct. 11, Charcoal box-irons.
 — C. F., & Bruerton, G., 1713, June 6, Coffee mills.
 — D. K. (*Sidebotham*), 2338, Aug. 6, Lubricating [axle-boxes].
 — E., 70, Jan. 9, Hydraulic lift for docking vessels.
 — G., 1138, Apr. 17, Shoes and boots.
 — G., 3055, Oct. 16, Shoes and boots.
 — G., 3393, Nov. 14, Preserving food.
 — J., 1387, May 7, Railway breaks.
 — J., & Woods, J. E. T., 1923, June 25, Alloy for [anti-acid metal, &c.].
 — J. L., 27, Jan. 4, Drain traps.
 — J. L., & Hill, E. J., 1193, Apr. 20, Boat lowering [apparatus].
 — R. D., & Jobson, R., 256, Jan. 25, Ships' compasses.
 — T., 2031, July 5, Winnowing or seed-dressing.
 — W. (*Andouin*), 1456, May 13, Extracting anthra- [cene and pitch].
 — W. (*Odovonge-Wysocki*), 1536, May 20, Lun- [cheon cases].
 Clark, W. A. (*Lake*), 251, Jan. 25, Lubricating.
 Clark, W. C., 3954, Dec. 30, Preventing persons entering [or leaving trains in motion].
 Clarke, D., & Hodgkinson, J., 2884, Oct. 1, Laths for [window blinds, &c.].
 Clarke, D. A. (*Lake*), 329, Feb. 1, Preparing, &c. hops.
 Clarke, E., 1100, Apr. 13, Cranked shafts or axles.

Clarke, F., 2209, July 24, Filling and drawing off liquids [from bottles, &c.].
 — J., 2629, Sep. 4, Portable, hot water boiler.
 — J. F., 3726, Dec. 7, Wash- [closets].
 — J. L., 349, Feb. 3, Preventing candles guttering.
 Clarke, T. C., Bonzano, A., & Griffin, J. (*Johnson*), [2701, Sep. 11, Bridges and viaducts].
 Clarke, W., & Payne, E. J., 2943, Oct. 5, Iron and steel.
 — W., & Walker, E., 3050, Oct. 16, Retarding, &c. [travel of ropes and chains; lifting apparatus].
 Claus, C. F., 3758, Dec. 11, Bricks, blocks, tiles, &c.
 Clay, J., 2507, Aug. 23, Saddles.
 — J., 2641, Sep. 5, Harness saddles and pads.
 — R., 2716, Sep. 13, Printing machines.
 — W., 1014, Apr. 5, Cutting and shaping metals.
 Clayton, C. H., La Monte, G., & Saxe, G. G. (*Haseltine*), [2670, Sep. 9, Colored and figured paper].
 Clayton, H. & H., 1664, June 1, Cutting clay, &c. into bricks.
 — H. & H., & Howlett, F., 2975, Oct. 9, Treating peat.
 — S., 3660, Dec. 4, Cranes.
 Cleaver, S. T., & Blundon, E. H., 461, Feb. 14, Cocks or [taps].
 Clegg, J., & Warbrick, J. F., 999, Apr. 4, Registering [apparatus].
 Clements, J. M., 2636, Sep. 4, Sewing machines & needles.
 Clemow, J. F., 3797, Dec. 14, Horse-hoes and corn drills.
 Clercq, A. Le (*Bonneville*), 238, Jan. 24, Copying presses.
 Clervaux, Le Comte E. de L. (*Hughes*), 2430, Aug. 15, [Cigars, &c.].
 Clews, R., 1269, Apr. 27, Weaving borders of rugs, &c.
 Clissold, W., 2072, July 9, Condensing, &c. fibrous sub- [stances].
 Closson, J. B. M. P. (*Newton*), 274, Jan. 29, Trans- [mitting motion].
 Clough, W. T. (*Cheesbrough*), 2156, July 18, Evapora- [ting acids, salts, &c.].
 Clover, C. J., & Ashlin, H. C., 2244, July 27, Steam-en- [gines].
 — C. J., & Ashlin, H. C., 2245, July 27, Register- [ing passengers in omnibuses, &c.].
 Coales, F., 1013, Apr. 5, Beer.
 Coates, J. C., & May, D., 168, Jan. 18, Neckties & scarves.
 Cobley, T., & Poynter, J. E., 3194, Oct. 28, Caustic baryta.
 Cochard, F., & Rousseau, C. E. (*Barlow*), 464, Feb. 14, [Preserving substances].
 Cochet, J., & Le Monnier, G., 1844, June 19, Advertising.
 Cochran, J., 1009, Apr. 5, Valves for overflow pipes.
 Cochrane, A., 1216, Apr. 23, Teaching languages, &c.
 — A. A., 2955, Oct. 8, Boilers.
 — H., & Evans, W., 1998, July 2, Knives & forks.
 Cockburn, D. (*Barr*), 3429, Nov. 16, Barrows.
 Cockill, J., Shaw, T., Keir, J., & Craven, J., 165, Jan. 18, [Scouring and setting hides, &c.].
 Cocks, T., 1559, May 22, Digging, &c. root crops.
 — T., 1560, May 22, Planting potatoes.
 Cockshott, T., 412, Feb. 8, Laying submarine cables.
 Codd, H., 2621, Sep. 3, Aerated liquid bottles.
 Coddington, R. (*Gally*), 1319, May 1, Printing presses, &c.
 Coc, L. W. (*Clark*), 524, Feb. 17, Railway time signals.
 Coffey, J. A., 64, Jan. 8, Subliming & distilling sulphur, &c.
 Cogswell, E., & Wilkins, N. & J. B., 3345, Nov. 11, Fulling.
 Cogswell, W. A. (*Judson*), 2439, Aug. 15, Governor [valves].
 Cohrs, J. H., 3714, Dec. 7, Breaks for tramway carriages.
 Colborne, J., 467, Feb. 14, Teaching drill.
 Colby, J. N., 1727, June 7, Glands of stuffing boxes.
 Cole, F., & Acton, R. G., 2091, July 11, Compressed air [engines].
 — J., 1724, June 7, Fire-arms.
 — J. W., & Walker, J. E., 1365, May 4, Screening coals.
 Coleby, T., 3070, Oct. 17, Reeling and tying hanks of [yarn, &c.].

Coles, D. H., & J. L. (Haseltine), 3583, Nov. 28, Sewing [machines].
 — *J. L. & D. H.* (Haseltine), 3583, Nov. 28, Sewing [machines].
Colladon, D. (Brown), 3126, Oct. 23, Compressing air and [gas; pistons, &c].
Collett, J. K., 1236, Apr. 25, Packing & preserving butter.
Collier, M., 3786, Dec. 13, Looms.
Collinge, J., 785, Mar. 14, Reaping and mowing.
Collins, C. W., 550, Feb. 20, Communicating in railway [trains].
 — *J. H., & Chatwood, S.*, 1954, June 28, Treating [ores].
Collinson, H. W., 68, Jan. 9, Grease-proof lining for hats [c].
Comey, W., & Turner, S. S., 1927, June 26, Loom stop [motions].
Condell, W. (Clark), 437, Feb. 10, Propelling vessels.
Condie, M., 1237, Apr. 25, Sewing-machines.
Conger, D. G. (Lake), 1304, May 1, Roofing.
Conisbee, W., & Smale, J., 3111, Oct. 22, Printing-machine cylinders.
Conlong, J., & Smith, J., 1717, June 7, Counter for hank- [winding machines, &c].
Connelly, P. F., 1581, May 23, Screw propellers.
Conniff, P., 3895, Dec. 23, Fire-bricks.
Conron, P. R., 2180, July 20, Brewing, distilling, &c.
Contarini, A. N. J., 3092, Oct. 19, Motive power-engines.
Cook, E., 3147, Oct. 24, Heating apparatus for steam [engines].
 — *E. A.*, 2506, Aug. 23, Animal charcoal.
 — *E. A., & Henderson, N. M.*, 422, Feb. 10, Treating [hydro-carbon oils].
Cook, F. (McComb), 2942, Oct. 5, Bale ties.
Cook, J., & Lafone, H., 2069, July 9, Blow pipes; gen- [erating heat].
 — *S.*, 1530, May 18, Weft forks for looms.
Cooke, H., 123, Jan. 16, Iron for ship boiler, and other [plates, &c].
 — *J., & Vick, C. W.*, 1242, Apr. 25, Feeding carding [engines, &c].
 — *J. S.*, 1943, June 27, Dyeing wool, &c. in hanks.
Coone, B. (Houghton), 3875, Dec. 21, Filling moulds [with clay, &c].
Cooper, A., & Quick, J. & J., 593, Feb. 23, Signal lamps.
 — *E. W., & Lowe, G.*, 2600, Sep. 2, Sewing- [machines].
 — *F.*, 741, Mar. 11, Finishing velvets & velveteens.
 — *H. E. L., & Glossop, G.*, 3113, Oct. 22, Steam [hammers].
 — *J.*, 296, Jan. 31, Casting metals.
 — *L. (Cooper)*, 1289, Apr. 30, Transporting pas- [sengers, goods, &c].
Cooper M. (Cooper), 1289, Apr. 30, Transporting pas- [sengers, goods, &c].
Cooper, W. T., 3160, Oct. 24, Effervescing mixtures.
 — *W. T.*, 3232, Oct. 31, Lozenges.
Cope, E., & Maxwell, J. R. (Benson), 104, Jan. 13, [Steam-engines].
 — *E., & Maxwell, J. R.* (Benson), 3617, Dec. 2, [Cylinders and valves of steam-engines, &c].
Cope, J., & Barrett, E. C., 1659, May 31, Printing.
 — *W. H.*, 692, Mar. 6, Boring, cutting, and working [rock, &c].
Copeland, J., 825, Mar. 19, Valves.
Copeland, R. A. (Smith), 2565, Aug. 28, Plugs and [ferrules for boiler tubes].
Copeman, E. S., 601, Feb. 26, Communicating in trains.
Copland, H. S., 2141, July 17, Treating sewage, &c.
 — *H. S. S.*, 3925, Dec. 27, Wood paving.
Copley, P., & Gillott, J., 2000, July 2, Cutting coal, &c.
Corbett, S., 731, Mar. 9, Ploughs and cultivators,

Corbett, S., 3022, Oct. 14, Ploughs.
 — *T.*, 1630, May 29, Winnowing & dressing grain.
 — *W., & Harrop, J. J.*, 1723, June 7, Puddling and [puddling furnaces].
Corbin, J., & Cunningham, J. G., 361, Feb. 5, Extract [for baths].
Cordier, J., 2202, July 24, Globe reflectors.
Cornell, J. B. (Lake), 960, Apr. 1, Fire-proof roofing.
Cornely, E. (Gedge), 2922, Oct. 3, Sewing & embroidering [machine].
Cornforth, S., & Dangerfield, J., 3819, Dec. 17, Pointing [rods and wire].
Cornish, K. H., 1420, May 10, Gas; distilling paraffin, &c.
 — *K. H., & Strange, A.*, 3960, Dec. 31, Casks.
 — *W.*, 3661, Dec. 4, Supporting saloons, &c., of [vessels].
Corpe, C. W., 3183, Oct. 26, Concrete buildings.
Corry, J., 2981, Oct. 10, Fire-grates.
Cory, E. & W. H., 555, Feb. 21, Artificial fuel blocks.
 — *W. H. & E.*, 555, Feb. 21, Artificial fuel blocks.
Costa, L. A. da, & Lawrie, T., 1593, May 25, Traps, [waste plugs or gullies].
Cotté, L., & Seymour, C. E. (Lake), 760, Mar. 12, Boots [and shoes].
Cottam, E., 458, Feb. 14, Buildings for keeping deeds, &c.
Cotter, R. H., 3835, Dec. 18, Steam-engines.
 — *W.*, 1756, June 11, Bow-saws.
 — *W., & Newton, E.*, 3783, Dec. 13, Saw-frames.
Cotterell, J. F., & Prudencio, F., 975, Apr. 3, Stoppering [bottles].
Cottino, G., 2201, July 24, Wind musical instruments.
Cottle, J. (Morgan-Brown), 1350, May 3, Centrifugal [machines].
Cotton, F. M., & Field, E., 365, Feb. 5, Steam-engines.
 — *T. H.*, 3497, Nov. 22, Oil fuel; feeding furnaces.
Cottrill, J., 1502, May 16, Piercing needle eyes.
Coulouvat, G. (Gedge), 952, Mar. 30, Jacks.
Coulter, J., & Harpin, H., 959, Apr. 1, Dressing stone, &c.
 — *J., & Fawcett, T.*, 2129, July 15, Governors.
Couper, P., 1369, May 6, Motive-power engines.
Courson, N. de (Gedge), 2150, July 17, Splitting and [cutting wood].
Courtenay, R. H., 2848, Sep. 27, Blocks for printing [from nature].
Coutelier, E. J. V. (Spence), 1108, Apr. 13, Metallic [coverings for roofs and walls].
Coventry, A., & Smith, W. F., 290, Jan. 21, Planing [machines].
Coward, T. R., 115, Jan. 15, Opening, &c. heads of [carriages].
Cowie, J., 3916, Dec. 24, Writing desks.
Cowper, E. A., 887, Mar. 23, Regenerative hot blast stoves.
 — *E. A.*, 1265, Apr. 27, Paper pulp.
 — *E. A.*, 3382, Nov. 13, Separating fibres for paper [pulp].
Cox, C. M., 2583, Aug. 30, Cooking apparatus.
 — *James A.*, 2769, Sep. 18, Affixing stamp to liquor [glasses].
 — *John, & S.*, 2204, July 24, Recovering and ex- [tracting oils and fats, &c].
 — *Joseph*, 2963, Oct. 8, Rivets, bolts, and spikes.
 — *S. & J.*, 2204, July 24, Recovering and extracting [oils and fats, &c].
 — *T., & Holland, W.*, 2907, Oct. 2, Umbrellas and [parasols].
 — *T., & Holland, W.*, 2962, Oct. 8, Umbrellas and [parasols].
 — *T. N., & Baker, J. L.*, 560, Feb. 21, Ploughs.
 — *T. N., & Baker, J. L.*, 1551, May 21, Ploughs.
Coxhead, F. C., & Miller, J. J., 2252, July 27, Marine [steam-engines].
Crabtree, J., 2676, Sep. 9, Winding weft on shuttles.

Crabtree, J., 3135, Oct. 23, Winding weft on shuttles.
 — J., S. & T., 1416, May 9, Singeing fabrics.
 — S., T. & J., 1416, May 9, Singeing fabrics.
 — T., S. & J., 1416, May 9, Singeing fabrics.
 Craddock, E., 1326, May 2, Pipe wrenches.
 Craig, B., 557, Feb. 21, Signalling in railway trains.
 Craig, D. (Jennings), 3230, Oct. 31, Telegraphing.
 Crampton, T. R., 931, Mar. 28, Furnaces.
 — T. R., 2262, July 29, Gas and fuel.
 Crane, J. E., & Ramsdell, W. H. (Lake), 1361, May 4, [Knitting].
 Cranston, J. G., 143, Jan. 17, Holding rock drills.
 Crapper, J. S., 231, Jan. 24, Administering gases.
 Craven, J., Cockill, J., Shaw, T., & Keir, J., 165, Jan. 18, [Scouring and setting hides, &c.]
 — J., Fox, S., Tannett, J., & Scott, J., 660, Mar. 2, [Boring shaft couplings, &c.]
 Craven, J. J. (Haseltine), 3843, Dec. 18, Rendering, &c. [animal matter; deodorising; treating blood].
 Crawford, H. & J., 2418, Aug. 14, Finishing thread, &c.
 — J. & H., 2418, Aug. 14, Finishing thread, &c.
 Crawshaw, A. T., & Kenward, W., 3648, Dec. 3, Bird [and animal trap].
 Cressey, J. R., 2230, July 26, Kitchen ranges, stoves, &c.
 Cresswell, A., 416, Feb. 9, Filtering liquids.
 Crévissier, L., & Lecamp, L., 1775, June 12, Cambering [leather, &c.]
 Crighton, S., 1152, Apr. 18, Regulating feeding of ma- [chinery].
 — S., W. & W. W., 803, Mar. 16, Converting [reciprocating into rotary motion, &c.]
 — W., W. W. & S., 803, Mar. 16, Converting [reciprocating into rotary motion, &c.]
 — W. J., & Moss, R. S., 3024, Oct. 14, Blinds [and shutters].
 — W. W., S. & W., 803, Mar. 16, Converting [reciprocating into rotary motion, &c.]
 Critchlow, T. (Lake), 3229, Oct. 31, Piston valve.
 Croasdale, B. R. (Lake), 148, Jan. 17, Bag for guano, &c.
 Crofts, J., & Dawson, R., 2047, July 6, Combing fibres.
 Croll, S., Barrett, R. T., & Plush, E. T. (Lake), 909, [Mar. 25, Bearings for journals].
 Crompton, G. (Tongue), 956, Apr. 1, Carpets, &c.
 — G. (Tongue), 1275, Apr. 27, Carpets, &c.
 Crop, J., 2016, July 4, Tobacco pipes.
 Cropper, J., 2682, Sep. 10, Cleansing, &c. fibres.
 — S. (Hopson & Allen), 1757, June 11, Ink foun- [tains for printing presses].
 Crossfield, C. J., & Barrow, J., 1171, Apr. 19, Utilizing [saccharine syrups].
 Croskey, J. R., 966, Apr. 2, Asphalt pavements.
 — J. R., 1533, May 20, Asphalt pavements.
 — J. R., & Remington, G., 1081, Apr. 12, Railway rails.
 Crossland, J. S., 1962, June 29, Boilers & feed-water heaters.
 — J. S., 3310, Nov. 8, Steam-boilers.
 Cross, C., 3709, Dec. 7, Velvets and other piled fabrics.
 — G. J., 337, Feb. 2, Iron for tramway wheels or tyres.
 — G. J., 3928, Dec. 27, Wheels for tramways, &c.
 — G. J., & Macgillivray, A., 1446, May 13, Cleaning [tramway rails].
 — J., 1841, June 19, Rubber for washing clothes, &c.
 Crossley, F. W. & W. J., 3878, Dec. 21, Grinding metal [surfaces].
 — J., & Brocklehurst, J., 3688, Dec. 6, Stench traps.
 — W. J. & F. W., 3878, Dec. 21, Grinding metal [surfaces].
 Crossman, J. M., & Rice, G. S. (Duggin), 3326, Nov. 9, [Securing window-sashes].
 Crowther, A., 2290, July 31, Drying yarns; tentering.
 Cullen, W., 1072, Apr. 11, Grinding grain.
 Callum, C., & Stevens, N. E., 2726, Sep. 13, Games.
 — C., & Stevens, N. E., 2727, Sep. 13, Roller blinds.

Culp, J. D., 1877, May 6, Drying and curing tobacco, &c.
 Cumis, J. L., & Martel, L. F. A. (Clark), 2677, Sep. 9, [Casting metal].
 Cunningham, D., 1522, May 18, Caissons, bridges, &c.
 — D., 2019, July 4, Breakwaters, sea-walls, &c.
 — D., 2132, July 16, Caissons, bridges, &c.
 — D., 2190, July 23, Breakwaters, sea-walls, &c.
 — G. A. A. & T. P. C., 2702, Sep. 12, Electro- [magnetic motors].
 — H. D. P., 544, Feb. 20, Fork guards.
 — J. G., & Corbin, J., 361, Feb. 5, Extract [for baths].
 — T. P. C. & G. A. A., 2702, Sep. 12, Electro- [magnetic motors].
 — W., 1231, Apr. 24, Snipping, combing, &c. [fibres].
 — W. J., 55, Jan. 6, Cutting type; carving [wood, &c.]
 — W. J., 3632, Dec. 3, Printing wood, paper, &c.
 Curror, D., & Dewar, J., 3529, Nov. 25, Filtering, &c. [fluids; manure].
 Curtis, H. W. (Lake), 1499, May 16, Combined seat [and desk].
 Curtis, W. J., 327, Feb. 1, Obtaining extracts; filtering.
 — W. J., 746, Mar. 11, Railways, tramways, & carriages.
 — W. J., 2699, Sep. 11, Railways, tramways, & carriages.
 Cutler, S., 348, Feb. 3, Fastening window sashes.
 Cutler, W. C., Tirrell, J. P., & Flether, J. W. (Lake), [2587, Aug. 30, Lighting burners].

D.

Da Costa, L. A., & Lawrie, T., 1593, May 25, Traps, [waste plugs or gullies].
 Daft, T. B., 2411, Aug. 13, India rubber manufactures.
 Daguin, E. (Vaughan), 3432, Nov. 18, Drawing pens.
 Dale, John, 2137, July 17, Oxalates of soda and potash.
 — Josiah, & Williamson, R., 3939, Dec. 28, Salt.
 — T., 2812, Sep. 24, Steam-boilers.
 Dalglish, W., 684, Mar. 6, Scotch bonnets.
 Danchell, F. L. H., 1394, May 7, Filtering medium.
 Dangerfield, J., & Cornforth, S., 3819, Dec. 17, Pointing [rods and wire].
 Daniels, J. (Lake), 1500, May 16, Drain pipes.
 Danks, S., 1053, Apr. 9, Lining puddling furnaces.
 — S., 1111, Apr. 13, Puddling & heating furnaces.
 — S., 2971, Oct. 9, Compressing balls and blooms of [iron, &c.]
 Dann, J. T. (Féron), 1699, June 5, Phosphorus.
 — J. T. (Richard), 2559, Aug. 28, Washing, &c. ores [of precious metals].
 — J. T. (Alleau), 3064, Oct. 17, Producing heat.
 Danter, R. S., & Temple, C. J. (Osborn), 816, Mar. 18, [Pipe joints].
 Danvers, F. C., 2617, Sept. 3, Artificial fuel.
 Darlow, W., 888, Mar. 23, Portable magnets.
 — W., 1334, May 2, Portable magnets.
 — W., 1665, June 1, Portable magnets.
 — W., 3221, Oct. 31, Curative magnets, &c.
 Date, F. H. & H. H. (Lake), 1088, Apr. 12, Converting [iron into steel].
 — H. H. & F. H. (Lake), 1088, Apr. 12, Converting [iron into steel].
 Daudenart, L. G. G., & Verbert, E. (Hughes), 2745, [Sep. 16, Baryta and strontia].
 — L. G. G., & Verbert, E. (Hughes), 2746, [Sep. 16, Treating greasy and washing liquors, &c.]
 Davenport, M., & Browne, J. C., 3144, Oct. 24, Buildings, [&c. for storing explosives].

Davey, G., 1443, May 11, Artificial ivory, &c.
 — G., 3182, Oct. 26, Artificial marble and cement.
 — H., 3208, Oct. 30, Evacuating condensers; ex-
 [hausting gas.
 — H. C., 2462, Aug. 19, Registering fares, &c. in
 [public vehicles.
 — J., 1165, Apr. 19, Ploughs.
 — W. H., 1211, Apr. 23, Washing machines.
 — W. H., 1610, May 27, Ironing & smoothing fabrics.
 Davidson, G., 1896, June 22, Washing paper pulp.
 — J. S., Warrington, T. A., & Brydon, R., 3507,
 [Nov. 23, Boring rock, &c.
 — J. S., Warrington, T. A., & Brydon, R., 3921,
 [Dec. 26, Drilling rock, &c.
 — T., 2868, Sep. 28, Fabric for mantles, rugs, &c.
 Davies, A. E., & Menzies, R. C., 1476, May 15, Paper-pulp.
 — A. H., 3596, Nov. 29, Steam-engine regulator.
 — E., 3012, Oct. 12, Hydraulic motive power machi-
 [nery.
 — E., & Dawson, S., 1995, July 2, Millstones.
 — E. T., 3247, Nov. 2, Gigs and other vehicles.
 — G. (Busby & Woodbury), 1186, Apr. 20, Stereop-
 [ticons.
 — G., & Turner, J. A., 1512, May 18, Waterproof
 [packing.
 — J. T. (Atkinson), 2902, Oct. 2, Curing & packing
 [hams.
 — P. J., 2838, Sept. 25, Regulating and shut off ap-
 [paratus for liquids.
 Davies, W. R. (Barlow), 2457, Aug. 17, Sawing wood.
 Davis, B. W., & Pardoc, J., 3248, Nov. 2, Printing machines.
 — G. D., & Hopcraft, T., 2089, July 11, Working
 [rudders.
 — J., 2214, July 25, Feeding steam-boilers.
 — T., 1869, June 21, Furnaces.
 — W., 130, Jan. 16, Vent peg or valve.
 — W., 320, Feb. 1, Taking votes at elections.
 — W., 3751, Dec. 11, Shipping, &c. screw-propellers.
 Davis, W. M., (Mills), 2970, Oct. 9, Electro-magnetic
 [clocks.
 Davis, W. R., 1714, June 6, Graining wood, &c.
 Davison, R., 3449, Nov. 19, Brewing.
 Dawes, W., 1857, June 20, Locomotive engines, &c.
 Dawson, A. & H. T., 1626, May 29, Typographic etching
 [and engraving.
 — H. T. & A., 1626, May 29, Typographic etching
 [and engraving.
 — J., 3102, Oct. 21, Table cutlery.
 — Richard, & Crofts, J., 2047, July 6, Combing fibres.
 Dawson, Robert (Grinlinton), 724, Mar. 9, Preparing pro-
 [ducts of coffee bush for food.
 — Robert (Ross), 2667, Sep. 9, Utilizing coffee bush.
 Dawson, S., & Davies, E., 1995, July 2, Millstones.
 Day, E., 3961, Dec. 31, Removing soot, &c. from boilers.
 — J. J., 3152, Oct. 24, High pressure valve.
 Day, W. (Lake), 10, Jan. 1, Looms.
 Deacon, H., 3309, Nov. 7, Bleaching liquor.
 Deans, P. D., & Mac Naughton, D., 453, Feb. 13, Sulphate
 [of ammonia.
 Deards, S., 761, Mar. 13, Heating conservatories, &c.
 D'Arincourt, L. C. A. J. G. (Clark), 255, Jan. 25, Electro-
 [magnets.
 De Biaschop, A. (Newton), 1594, May 25, Caloric engines.
 Decamps, J. D. H. T., 844, Mar. 20, Suspensory apparatus
 [for the sick, &c.
 De Carvalho, A. J. P., 2808, Sep. 23, Mechanical beams
 [or girders.
 De Chodzko, N. F. B., 1823, June 17, Furnaces.
 Decottegnie, A., Storck, H., Hentsch, E. & A., Lutscher, A.,
 [& Grininger, F. (Lyte), 3685, Dec. 5, Distilling, &c.
 De Courson, N. (Gedge), 2150, July 17, Splitting and
 [cutting wood.

De Dedulin, J., 2239, July 26, Writing machine.
 Dederick, P. K. (Clark), 3398, Nov. 14, Baling press.
 De Derschan, Baron N. (Feldtmann), 820, Mar. 19,
 [Heating, &c. railway carriages.
 Dedulin, J. de, 2239, July 26, Writing machine.
 Dee, H. W., 127, Jan. 16, Fastenings for cigar-cases, &c.
 — H. W., 158, Jan. 18, Fastening and hinge for cigar
 [cases, &c.
 — H. W., 160, Jan. 18, Fastenings for cigar cases, &c.
 Deere, J., 2332, Aug. 5, Artificial fuel.
 De Forest, T. B., 1564, May 22, Pins.
 — T. B., 1565, May 22, Sticking pins in paper.
 De Forville, Marquis (Schanschieff), 767, Mar. 14, Sig-
 [nalling on railways.
 — Marquis (Schanschieff), 769, Mar. 14,
 [Telegraphic signals and despatches.
 Defries, H., 516, Feb. 17, Lamps.
 De Froidville, F. L. T., 3190, Oct. 26, Mattresses for
 [ships, &c.
 Defty, H., 2191, July 23, Smelting furnaces.
 — H., 3842, Dec. 18, Fastening for ropes, cords, &c.
 — H., & Stewart, J. F., 2020, July 4, Puddling fur-
 [naces.
 De Gonzalo, L. L., & Grisei, S. (Brandon), 82, Jan. 10,
 [Treating the tipha latifolia for upholstery, &c.
 Deiss, A., 2476, Aug. 20, Process of percolation for ex-
 [tracting fatty matters, &c.
 Deiss, E. (Clark), 3823, Nov. 8, Stearic acid.
 D'Ivernois, E. L. C., & Gramme, Z. T. (Johnson), 1254,
 [Apr. 26, Magneto-electric machines.
 De Kercado, G. T., (Gedge), 3766, Dec. 12, Gas motive
 [power engine.
 De Labarre, E. (Hughes), 191, Jan. 20, Preparing wool
 [for spinning.
 De Lara, G., 2330, Aug. 5, Printing on blotting-paper,
 [&c.
 — G. & De Salomos, Viscount M., 2107, July 12,
 [Interleaving diaries, &c.
 De Laskarzewski, C. A., & Kehrmann, H., 1313, May 1,
 [Pianos.
 — C. A., & Kehrmann, H., 3234, Nov. 1,
 [Musical instrument.
 De Latouche, J. A. C., 3468, Nov. 20, Ordnance, fire-
 [arms, &c.
 Delattre, C., 967, Apr. 2, Sizing yarn.
 — C., 997, Apr. 4, Sizing warps.
 Delbanco, I. (Smith), 3419, Nov. 16, Stopping vehicles.
 Delmar, J. J., 2729, Sep. 13, Carpets and piled fabrics.
 Demailly, G. (Henderson), 3820, Dec. 17, Sewing kid
 [gloves, &c.
 — G., (Henderson), 3852, Dec. 19, Filtering,
 [&c., water.
 De Malortie, C., Baron., & Woods, J. E. T., 3803, Dec. 16,
 [Preserving food.
 De Massas, F. A. E. G., (Bonneville), 1552, May 21,
 [Treating cotton seeds.
 De Mercader, E., & De Terré, A. (Watteau), 752, Mar.
 [12, Explosive compounds.
 De Mestre, J. A. (Bonneville), 174, Jan. 19, Securing
 [corks in bottles.
 — J. A. (Bonneville), 2211, July 25, Wire
 [coverings for securing corks in bottles.
 Demeure, D. (Mills), 1384, May 6, Heating air.
 De Michele, V. D., 3371, Nov. 12, Portland cement.
 De Mignot, A. V., & Ganter, J., 1481, May 15, Com-
 [presed gas engines.
 De Montoisson, J. L., 12, Jan. 2, Removing hair, &c.
 [from skins.
 — J. L., 13, Jan. 2, Tanning.
 — J. L., 2001, July 2, Removing hair, &c.
 [from skins.
 — J. L., 2002, July 2, Tanning.

De Moriès, M. C. F. C. (Clark), 2785, Sep. 13, Propelling vessels.
Denayrouze, L. (Imray), 2142, July 17, Supporting [respiration & light in mines, &c.
De Negri, C., 76, Jan. 10, Paper-pulp.
 — *C.*, Herrmann, G., & Guest, W. 736, Mar. 11, [Hat bodies, sacks, &c.
 — *C.*, Herrmann, G., & Guest, 2158, July 18, [Braiding whips, &c.
De Negroni, J. L., 2198, July 23, Stoppering bottles.
 — *L.*, 3743, Dec. 10, Stopping horses.
Denham, A. A., W. H. & P. V., 1936, June 26, Water [closets, &c.
 — *P. V., A. A. & W. H.*, 1936, June 26, Water [closets, &c.
 — *W. H., P. V. & A. A.*, 1936, June 26, Water [closets, &c.
Denis, J., 3801, Dec. 14, Desiccating wood, &c. for pulp.
Denne, T. J., & Hentschel, A., 1347, May 3, Dyeing and [printing fabrics.
 — *T. J., & Hentschel, A.*, 1348, May 3, Finishing [and currying leather.
 — *T. J., & Hentschel, A.*, 1373, May 6, Preserving meat.
 — *T. J., & Hentschel, A.*, 2385, Aug. 10, Water- [proofing.
 — *T. J., & Hentschel, A.*, 2429, Aug. 15, Stiffening, [dyeing and printing fabrics, &c.
Dennis, J. H., 1616, May 28, Treating copper precipi- [tate, &c.
Dennison, A. L., 356, Feb. 3, Watches and chrono- [meters.
Densmore, E. (Lake), 1458, May 14, Painting.
Denton, J. B., & Field, R., 742, Mar. 11, Filtering sewage [and irrigating.
Depouilly, C. (Ripley), 283, Jan. 30, Coloring fabrics.
Deregnacourt, A., 1431, May 11, "Cutters" for cutting [out leather, paper, &c.
Derham, T. S., 1048, Apr. 9, Bricks.
 — *T. S., & Thairlwall, C. W.*, 1955, June 28, Bricks.
Derschan, Baron N. de (Feldtmann), 820, Mar. 19, [Heating, &c. railway carriages.
De Sainte Marie, C., 3335, Nov. 9, Tanning.
De Salomos, Viscount M., & De Lara, G., 2107, July 12, [Interleaving diaries, &c.
Desbordes, E. A., 810, Mar. 18, Carts or carriages.
Desgoiffe, J. A., 1447, May 13, Telegraph posts.
Deshayes, A. V., & Mayer, M., 1251, Apr. 26, Embroidering.
D'Silva, W. (Le Gros), 2008, July 3, Drilling rock, &c.
Desjardin, P. A., 3244, Nov. 1, Metallic alloys.
Desmolins, C. L., 2189, July 23, Portable barricade.
De Suzini-Ruiseco, J. Count (Clark), 300, Jan. 31, [Cigarettes.
De Terré, A., & De Mercader, E. (Watteu), 752, Mar. 12, [Explosive compounds.
De Tivoli, V. (Giacomini), 221, Jan. 23, Brushes and [brooms.
De Voy, J. C. (Lake), 2342, Aug. 6, Ink-erasing compound.
De Waal, W. van, 2710, Sep. 12, Stays and corsets.
Dewar, J., & Curror, D., 3529, Nov. 25, Filtering, &c. [fluids; manure.
Dewey, R. H., & Allen, A. N. (Bonneville), 375, Feb. 5, [Lighting gas.
Dexter, J. L., 3223, Oct. 31, Cooking screens.
De Zuccato, E., 1963, June 29, Producing copies of [writings, &c.
Dickey, W. T. Y., 151, Jan. 18, Steam and sailing vessels.
Dick, C. J. A. & G. A., 2827, Sep. 25, Telegraph wires.
 — *G. A. & C. J. A.*, 2827, Sep. 25, Telegraph wires.
Dickson, A., & Jenkinson, J., 175, Jan. 19, Leather.
 — *J. H.*, 1643, May 30, Obtaining fibres from plants.
 — *J. H.*, 2995, Oct. 10, Treating fibre bearing plants.
Diehl, G. H. (Lake), 527, Feb. 19, Steam-boiler furnaces.

Dieterich, C. F., Schüssler, A., & Floyd, J. R. (Clark), [901, Mar. 25, Gas retorts.
Dilkes, J., & Goldsmith, G., 3156, Oct. 24, Roasting, &c. [by gas.
 — *J., & Goldsmith, G.*, 3269, Nov. 4, Clearing gas [pipes.
Dillon, T. A., 2594, Aug. 31, Utilizing waste steam.
Dilnutt, W. H., 932, Mar. 28, Furnace fire-bars.
 — *W. H.*, 2284, July 30, Furnace fire-bars.
Dingley, W., 556, Feb. 21, Iron and steel.
Dingwall, A. C., 3543, Nov. 26, Sewing-machines.
Ditchburn, T. J., 3575, Nov. 28, Treating vegetable fibres.
Ditchfield, W., Knowles, J., & Shaw, H., 122, Jan. 15, [Weaving.
Di Tergolina, V. Count, 208, Jan. 23, Bits for horses, &c.
Dixon, G., 2394, Aug. 12, Fringes, trimmings, &c.
 — *G., Hughes, T., & Maddox, J.*, 1526, May 18, [Cutting arrangement for looms.
Dixon, J. (Schlesinger), 98, Jan. 12, Combined tool.
Dixon, J. W., Buttery, W., & Bates, J., 3556, Nov. 26, [Extracting caps from cartridge cases.
 — *R.*, 1527, May 18, Pickers for looms.
 — *W. S.*, 2717, Sep. 13, Plute iron or refined metal.
Dobson, B. & W., & Rushton, T. H., 292, Jan. 31, Ginning [cotton.
 — *B. & W., & Rushton, T. H.*, 434, Feb. 10, Ginning [cotton.
 — *G., & Ellis, R. J.*, 247, Jan. 25, Preventing cor- [rosion in boilers.
 — *W., & Rushton, T. H.*, 2378, Aug. 9, Ginning [cotton.
 — *W. & B., & Rushton, T. H.*, 292, Jan. 31, Ginning [cotton.
 — *W. & B., & Rushton, T. H.*, 434, Feb. 10, Ginning [cotton.
Doekray, A., 3469, Nov. 26, Roving, spinning, &c.
Dod, S. (Newton), 1658, May 31, Sugar.
 — *S.* (Newton), 3588, Nov. 28, Sugar.
Dodd, J., 2482, Aug. 21, Mules for spinning, &c.
 — *J., & Buckley, R.*, 3569, Nov. 27, Spinning mules.
 — *J., & Peel, W.*, 3877, Dec. 21, Reaping & mowing.
Dodge, G. P., 2459, Aug. 17, Cement for pipe joints, &c.
 — *G. P. (Dodge)*, 3059, Oct. 17, Hand warmer or muff.
Dodge, J. M. (Haseltine), 2397, Aug. 12, Adjusting screw [propellers and rudders.
 — *T. A. (Dodge)*, 3059, Oct. 17, Hand warmer or [muff.
 — *T. A. (Morgan-Brown)*, 2464, Aug. 19, Splitting [leather.
 — *T. H. (Johnson)*, 3619, Dec. 2, Spools.
 — *T. H. (Johnson)*, 3969, Dec. 31, Boots and shoes.
 — *W. C., Welch, J. H., E. P. & R. W., & Towle,* [H. E., 3373, Nov. 13, Fluid motors.
Dominy, G., & Russell, J., 36, Jan. 4, Securing window- [sashes, &c.
Don, T., & Wright, R. A., 970, Apr. 2, Substitutes for [leather, &c.
Donaldson, W., 3681, Dec. 5, Joints for pipes.
Donovan, R. E., 2055, July 8, Drill-stock.
Doré, L. P., 2027, July 4, Securing false hair on ladies' [heads.
Doria, H. K., 1625, May 29, Miners' safety-lamps.
Dorlan, J. McC. (Mills), 2029, July 4, Sizing paper, [cotton, &c.
Dormoy, P. A. (Casson), 3763, Dec. 11, Furnaces.
Dormoy, P. A., & Paget, F. A., 2287, July 31, Furnaces.
Dornovo, D., Kniaghinsky, P., & Sevastganoff, N. [(Doubelt), 1189, Apr. 20, Transmitting [and registering telegraphic despatches.
 — *D., Kniaghinsky, P., & Sevastganoff, N.* [(Doubelt), 1822, June 17, Transmitting [telegraphic despatches.

Dornowo, D., Kniaghininsky, P., & Sewastganoff, N.
[(Doubelt), 2945, Oct. 5, Transmitting and
registering telegraphic despatches.

Dorrell, J., 1726, June 7, Receptacle for coal, corn, &c.

Dorsett, G. A., 1892, June 22, Obtaining anthracene.

Doty, E., Milimore, G. W., & Mickel, R. & I. (Clark),
[220, Jan. 23, Railway axles and wheels.

Doty, H. H., & Gardner, E. T., 1233, Apr. 24, Lamps for
[railway carriages.

Doubelt, M. (Lwoff), 1649, May 31, Preparing iron to
[resist tension.

——— M. (Kniaghininsky, Sewastganoff, & Dornowo),
[1189, Apr. 20, Transmitting and registering
[telegraphic despatches.

——— M. (Kniaghininsky, Sewastganoff, & Dornowo),
[1892, June 17, Transmitting telegraphic des-
[patches.

——— M. (Kniaghininsky, Sewastganoff, & Dornowo),
[2945, Oct. 5, Transmitting and registering
[telegraphic despatches.

Doudney, D. A., & Adams, H. O., 178, Jan. 19, Portable
[disinfectant.

Douglas, J., & Scott, J., 2310, Aug. 2, Adjusting ships'
[compasses, &c.

——— W., 2613, Sep. 3, Concrete building blocks.

Douglas, W. R. (Johnson), 1329, May 2, Disengaging
[ships' boats.

——— W. R. (Johnson), 3554, Nov. 26, Detaching
[ships' boats.

Douglass, F. H., 2628, Sep. 4, Protecting animals and
[crops.

Douillard, C. M. J. (Newton), 1729, June 7, Nocturnal
[telegraphic signals.

Dove, J., 739, Mar. 11, Boots and shoes.

Downes, J., 2066, July 9, Steam-engines.

Downing, W., 1975, June 29, Floor cloths, felt, & paper;
[coloring and printing same.

Doyen, E. P., Sparrow, W., & Emery, S. W. (Lake),
[770, Mar. 14, Preventing injury to railway
[carriages.

Doyen, O., 1743, June 10, Coffee tablets.

Doyon, Jouvin, & Co. (Brewer), 2804, Sep. 23, Gloves.

Dreux, A. E. le, Oursel, V. C. J., & Chéradame, A. L.
[(Lake), 2053, July 6, Ventilating.

Drevet, J., 689, Mar. 6, Hydraulic beton.

——— J., 2638, Sep. 5, Hydraulic beton.

Drewer, H., & Atkins, T. (Millward), 1850, June 19,
[Musical instruments.

Dreyfus, C., 2270, July 30, Dyeing and printing fabrics.

Dreyscharff, P. R. (Abel), 2229, July 26, Spinning mules.

Drinkwater, J. H., 2625, Sep. 4, Flocked fabrics.

Droulers-Vernier, P. C. F. J. (Mewburn), 511, Feb. 17,
[Hackling-machines.

Drummond, J., 2368, Aug. 9, Reaping and mowing.

Dryden, J. A., & Tandy, G. G., 648, Mar. 1, Lamps.

Dubbin, D., 661, Mar. 4, Brackets and stops for ladders.

——— D., 1134, Apr. 17, Cask stand.

——— D., 2626, Sep. 4, Ladders.

Dubois, A. (Clark), 2219, July 25, Travelling garment
[and holder.

——— E., & Gueury, F. (Clark), 2281, July 30, Fire-
[arms.

——— E. A. (Vaughan), 3192, Oct. 28, Gas.

——— G. & Francois, J. (Watteau), 1398, May 7, Driv-
[ing holes in rocks.

Du Bois, J. C. (West), 2410, Aug. 13, Ginning cotton.

Dubosq, A. N., 2544, Aug. 27, Landau carriage.

Duchamp, J. J. (Ray), 1439, May 11, Telegraphic sig-
[nalling.

Duckers, M., & Taylor, R., 3036, Oct. 15, Looms.

Duckworth, W., & Fielding, J., 1562, May 22, Railway
[breaks.

Duclos, E. (Sauvée), 2024, July 4, Motive-power.

——— E. (Sauvée), 2967, Oct. 9, Steam-boilers.

Ducomet, J., 1754, June 11, Steam-gauges.

——— J. (Legris), 1272, Apr. 27, Packing cases.

Ducros, P. A. (Robert), 1621, May 29, Tricycles, &c.

Duer, S., 1615, May 28, Lifting ships out of the water.

Duff, C., 1293, Apr. 30, Treating fibres for paper and
[textile fabrics.

Duff, J. B. (Lake), 722, Mar. 8, Steam-engine governors.

Duffaud, L., & Frear, W. H., 2797, Sep. 21, Transforming
[vegetable fibres into cotton.

Dufrené, H. A. (Tellier), 228, Jan. 24, Refrigerating.

——— H. A. (Mouzin), 1163, Apr. 19, Preserving
[fabrics from moisture.

——— H. A. (Riondey), 1328, May 2, Watches.

——— H. A. (Faure & Kessler), 2205, July 24, Con-
[centrating and evaporating sulphuric acid, &c.

——— H. A. (Perrot), 2234, July 26, Carriages, &c.

——— H. A. (Sacc), 2529, Aug. 26, Preserving fruit.

Dugdale, A., Mingrat, J., & Vansteenkiste, A., 1682,
[June 4, Cocks.

Duggin, C. (Crossman & Rice), 3326, Nov. 9, Securing
[window sashes.

Du Lin, J. M. J. C., & Guillemare, A. F. (Johnson), 1410,
[May 8, Manure.

Dumbleton, C., 822, Mar. 19, Cutting screw threads.

Dumonthier, C. (Clark), 3917, Dec. 24, Fire-arms.

Du Motay, C. M. T., 2331, Aug. 5, Purifying cast
[irons, &c.

Du Motay, C. M. T. (Smith), 2, Jan. 1, Treating lyes in
[preparing fibres, &c.

Duncan, A. & A. C., 2648, Sep. 6, Producing turkey red.

——— A. C. & A., 2648, Sep. 6, Producing turkey red.

——— A. B., Macnaughton, J., Kerr, W. H., &
[Brydges, C. J., 1137, Apr. 17, Fire-arms.

——— G., Wilson, W. A., & Lauder, G., 3834, Dec. 18,
[Stereotypes.

——— W. L., 3673, Dec. 4, Soles for boots, &c.

Dunham, T. H. (Morgan-Brown), 3213, Oct. 30, Oakum.

Dunn, J. C., & others (Edwards), 777, Mar. 14, Dial
[plates for clocks, &c.

Dunn, N., 939, Mar. 30, Pump for draining mines.

Dupa, E. G. E. (Henry), 1310, May 1, Reeds, sleys or
[combs.

Dupont, J., 1769, June 12, Obtaining fibres, &c. from
[plants.

——— J. B. V. E., 930, Mar. 28, Musical wind instru-
[ments; music holders.

Dupont, L., & Guichard, E. A. D. (Lake), 962, Apr. 1,
[Producing patterns on fabrics.

Dupré, W. H., 1541, May 21, Wind guards & ventilators.

Durafort, J. M. (Johnson), 1495, May 16, Cocks or valves
[for aerated liquids.

Durand, F. (Helbronner), 3785, Dec. 13, Sluices.

——— F. (Helbronner), 3800, Dec. 14, Hydraulic
[foundations.

Durfee, Z. S. (Abel), 685, Mar. 6, Bessemer steel and
[iron; iron castings.

Durham, F., & Hupton, H. E., 1238, Apr. 25, Indicating
[or checking apparatus.

Durst-Wild, frères (White), 1793, June 14, Hats, bon-
[nets, &c.

Dusart, L., Bardy, C., & Gibou, E., 812, Mar. 18, Con-
[verting starch into gum, &c.

Duthu, J. B., 3076, Oct. 18, Balloon or aerial machine.

Dyne, T. R. & W., 170, Jan. 18, Cleansing pavements
[and ways.

——— W. & T. R., 170, Jan. 18, Cleansing pavements
[and ways.

E.

Eacott, W. (Wilson), 1759, June 11, Advertizing.
 Eades, W. & W. T., 2166, July 19, Tube cutter & wrench.
 — W. & W. T., 3598, Nov. 29, Raising and lowering [weights].
 — W. T. & W., 2166, July 19, Tube cutter & wrench.
 — W. T. & W., 3598, Nov. 29, Raising and lowering [weights].
 Eagles, T. D. (Bergehausen, Philipps, & Kiesling), 1263, [Apr. 27, Heating rooms, carriages, &c].
 Earnest, G. H. (Lake), 521, Feb. 17, Fire-arms.
 Easterbrook, W., 1606, May 27, Locking points and signals.
 Easton, W., & Tattersall, F., 2086, July 10, Air com- [pressing engines].
 — W., & Tattersall, F., 3624, Dec. 2, Ventilating.
 Eastwood, T. C., & Little, G., 904, Mar. 25, Preparing [and combing fibres].
 Eckersley, J., & Nichol, J. D., 455, Feb. 13, Drying and [pressing printed paper].
 Eckhold, C. A. C., 1547, May 21, Motive-power.
 — C. A. C., 1612, May 28, Ink supplying pen- [holder].
 — C. A. C., 2241, July 27, Drawing corks, &c.
 — C. A. C., 2909, Oct. 2, Measuring distances, [altitudes, and angles].
 Edison, R. W. (Tatham & Brittin), 2174, July 20, [Platform lifts].
 Edes, W., 2774, Sep. 19, Steam-boilers.
 Edgemohe, R. J. F., & Fitzmaurice, Hon. J. T., 112, [Jan. 13, Tobacco cartridges].
 Edg. J., 1170, Apr. 19, Steam generators.
 Edg. W. (Clark), 414, Feb. 8, Metallic knitted fabrics, &c.
 Edm. T. A., 1453, May 13, Printing telegraphs.
 Edmon, T., 3729, Dec. 9, Rivets, spikes, screws, &c.
 Edmon, S., 2758, Sep. 17, Knapsacks, &c.
 Edmond, J. W., 647, Mar. 1, Motive-power.
 Edmund (Thornton & Buckland), 495, Feb. 16, [Dust shield for railway carriages].
 — Edmund (Dunn & others), 777, Mar. 14, Dial [plates for clocks, &c].
 — Edmund (Blessing, Townsend, & Jackson), [1139, Apr. 17, Steam traps].
 — Edmund (Thornton), 1969, June 29, Preventing [escape of sparks from chimneys].
 Ernest, 73, Jan. 9, Photo-mechanical printing.
 — G., 1287, Apr. 30, Cabs and other vehicles.
 — G., 3166, Oct. 25, Cabs and carriages.
 — Job, 2599, Sep. 2, Fittings for gas pipes, &c.
 — John, 102, Jan. 12, Garters, belts, & fastenings.
 — John, 297, Jan. 31, Railways.
 — John, 374, Feb. 5, Locks.
 — John, 2259, July 29, Carriage door fastenings.
 — John, 2501, Aug. 22, Railway signal alarms.
 — John, 2984, Oct. 10, Railway signal alarms.
 — R., 725, Mar. 9, Portable engines: steam [ploughing].
 — R., & Robinson, T., 475, Feb. 15, Puddling, &c. [furnaces].
 — R. J., 1379, May 6, Sand, emery, and glass [papers, &c].
 — S., Follows, F. W., & Bate, J., 2949, Oct. 7, [Chaff cutting machines].
 — W., 3795, Dec. 14, Rotary pumps.
 Eggleston, J. S. (Clark), 1749, June 10, Lubricating [axles, &c].
 Elmann, L. M., & Forquignon, J. B. L. (Johnson), [2712, Sep. 12, Purifying metals].
 — M. L. (Henry), 3692, Dec. 6, Preserving ships' [sheathing, &c].

Eiben, F. T. T., & Buckholz, G. A., 3908, Dec. 24, [Motive-power].
 Eichelbrenner, A., & Muller, E. (Lake), 200, Jan. 22, [Furnaces & heating].
 Ekman, P. J., 834, Mar. 19, Window-sashes and frames.
 Elce, J., & Arundel, H. B., 3025, Oct. 14, Preparing fibres.
 Electric Gas Lighting Co. (Samuel), 2592, Aug. 31, [Lighting gas by electricity].
 Ellefsen, A. S., 2534, Aug. 26, Generating steam.
 Ellington, E. B., & Anderson, J. L., 3107, Oct. 22, [Storing grain and seed].
 — E. B., Harrison, J. H., & Johnson, B., 3650, [Dec. 4, Raising & transporting loads].
 — E. B., & Harrison, J. H., 3812, Dec. 16, [Hydraulic cylinders and rams].
 Elliott, J. W., 940, Mar. 30, Cleaning table cutlery.
 Ellis, G. H., 280, Jan. 30, Horse-shoes.
 — J. C., 1451, May 13, Railway carriages.
 — R. J., 611, Feb. 26, Tubular fire bar for furnaces.
 — R. J., & Dobson, G., 247, Jan. 25, Preventing corro- [sion in boilers].
 — S., 652, Mar. 2, Finishing untapped nuts.
 — T. A., 1815, June 17, Horse shoes, &c.
 — W., 1360, May 4, Cutting wood.
 — W., & Greener, T., 2950, Oct. 7, Iron; fettling for [furnaces].
 Ellison, J., 2334, Aug. 6, Tilts for casks, &c.
 Ellson, W. E., 2075, July 10, Guarding ships from strand- [ings, &c].
 Ellsworth, W. L. (Lake), 900, Mar. 25, Fire extinguishers.
 Elman, S., & Brown, H. L., 24, Jan. 3, Cigars.
 Elmslie, E. W., 704, Mar. 7, Hermetically closed cases, &c.
 Elsdon, J., 3658, Dec. 4, Combined scarf & shirt front.
 Elsdon, R., 573, Feb. 22, Converting cast iron into steel, &c.
 Elson, S., 695, Mar. 7, Fuel economisers.
 Elwell, J. F., & Grove, J., 2048, July 6, Safes.
 Elwert, J. H., & Pack, J. J. M. (Morgan-Brown), 1880, [June 22, Extracting ammonia].
 Emery, A. H. (Newton), 406, Feb. 7, Weighing machines.
 — S. W., Doyen, E. P., & Sparrow, W. (Lake), 770, [Mar. 14, Preventing injury to railway carriages].
 Emme, J., & Woodward, J., 267, Jan. 27, Fire-arms.
 Emmens, S. H., 2451, Aug. 16, Roads, paths, & floorings.
 — S. H., 2453, Aug. 16, Producing light & heat.
 Enault & Co. (Johnson), 1951, June 28, Preserving but- [ter, &c].
 Engel, L., 1388, May 7, Attaching thermometers to um- [brellas, &c].
 Ennor, N., 271, Jan. 29, Crushing ores; lifting, wind- [ing, &c].
 Enoch, J., Terrell, E. P., & Allen, D. B. (Lake), 315, [Feb. 1, Operating loom shuttles].
 Ensor, E., 3504, Nov. 23, Furnaces; supplying same with [fuel].
 — E., 3570, Nov. 27, Drying bricks, pottery, &c.
 — E., & Hird, J., 3071, Oct. 17, Stopper for bottles, &c.
 Entwistle, J., 3105, Oct. 21, Railway signals.
 — T., Heyes, G., Wilson, P., & Hunter, J., 2400, [Aug. 12, Warping machines].
 Erichsen, J., & Maardt, J. G. (Jensen), 1122, Apr. 15, [Coke ovens; salt].
 — J., & Maardt, J. G. (Jensen), 1423, May 10, [Coke ovens, &c].
 Ernst, J. R., & Sulzer, H. & A. (Imray), 2193, July 23, [Steam cylinder valves].
 Errani, L. C., & Anders, R. (Palmer), 1126, Apr. 16, [Motive-power].
 — L. C., & Anders, R. (Hughes), 3481, Nov. 21, [Motive-power].
 Escher, C. de G. (Clark), 2404, Aug. 13, Looms.
 Eskrett, C., & Macdonald, T., 62, Jan. 8, Preventing [sticking of valves].

Evans, D., & Gregg, S. G., 771, Mar. 14, Road surfaces, [bridges, pillars, &c.]
 — I., 3293, Nov. 6, Combined envelopes and letter [paper, &c.]
 — M., 3666, Dec. 4, Signalling in trains.
 — P. C., 937, Mar. 28, Feeding scribblers, carding [engines, &c.]
 — W., & Cochrane, H., 1998, July 2, Knives & forks.
 Evens, T., & Heath, T. E. & T. E., 2123, July 13, Artificial fuel.
 — T., & Heath, T. E. & T. E., 2125, July 13, Com- [pressing by hydraulic power.]
 — T., & Heath, T. E. & T. E., 3644, Dec. 3, Com- [pressing materials.]
 Everickx, C. J., 260, Jan. 26, Portmanteaus, &c.
 Everitt, T., 1860, May 31, Feeding troughs.
 — W. E., 3266, Nov. 4, Metallic tubes.
 Evvard, M., 2720, Sept. 13, Washing coal, &c.
 Ewell, C., Howes, S., & Babcock, A. & N. (Benson), [2192, July 23, Smut machine & grain separators.]
 Exall, W., 672, Mar. 5, Tube expanders.
 Eyland, E. S., & Warren, J. B., 3112, Oct. 22, Construct- [ing and working railways.]
 Ezekiel, M., Faehzt, E. F. M., & Cathcart, J. L. (Mills), [61, Jan. 8, Hooks.]

F.

Fabre, J. M., (Bonneville), 2077, July 10, Bits.
 Faehzt, E. F. M., Cathcart, J. L., & Ezekiel, M. (Mills), [61, Jan. 8, Hooks.]
 Fair, W., & Bow, W., 2817, Sep. 24, Steering ships.
 Fairbairn, Sir A., Kennedy, T. S., & Naylor, J. W., 2533, [Aug. 26, Preparing fibres.]
 Fairgrieve, T., & Laidlaw, W., 1491, May 16, Carding.
 Fairholme, C., 2260, July 29, Signalling in trains.
 — G. K. E., 1197, Apr. 22, Fire escapes.
 Fairlie, R. F., 1087, Apr. 12, Increasing adhesion of trains [on gradients.]
 — R. F., 2387, Aug. 10, Locomotive engines.
 — R. F., 3103, Oct. 21, Nitrate of soda.
 — R. F., & Perkins, L., 2616, Sept. 3, Locomotive [engines.]
 Falcimagne, F. J. (Clark), 1748, June 10, Pistons.
 Fallows, J. T., & Walton, W., 1008, Apr. 5, Rolling wire.
 Fanshawe, H. R., & Bird, M., 1823, May 2, Cigars, che- [roots, &c.]
 Farcot, J. J. L., M. B. A., & M. J. D., Chateau, J. E. E., [(Newton), 2635, Sep. 4, Regulating speed of [engines, &c.]
 — J. J. L., M. B. A., & M. J. D., & Chateau, J. E. E., [(Newton), 3776, Dec. 12, Governors.]
 — M. B. A., M. J. D., & J. J. L., & Chateau, J. E. E., [(Newton), 2635, Sep. 4, Regulating speed of [engines, &c.]
 — M. B. A., M. J. D., & J. J. L., & Chateau, J. E. E., [(Newton), 3776, Dec. 12, Governors.]
 — M. J. D., J. J. L., & M. B. A., & Chateau, J. E. E., [(Newton), 2635, Sep. 4, Regulating speed of [engines, &c.]
 — M. J. D., J. J. L., & M. B. A., & Chateau, J. E. E., [(Newton), 3776, Dec. 12, Governors.]
 Farinaux, — (Mewburn), 3404, Nov. 15, Purifying feed [water.]
 Farjon, L. A. (Brookes), 1355, May 4, Communicating [motion and pressure to presses, valves, vices, &c.]
 — L. A. (Brookes), 3490, Nov. 21, Joining pipes.
 Farmer, James, 1761, June 11, Stretching, &c. fabrics.
 — John, 3381, Nov. 18, Musical instruments.

Farmer, John, & Ronald, B., 89, Jan. 11, Waterclosets [and valves.]
 Farquhar, J. F. C., 727, Mar. 9, Lamps.
 Farquharson, J., 1592, May 25, Fire-arms.
 Farran, J., 806, Mar. 18, Fancy weaving.
 — J., 8527, Nov. 25, Fancy weaving.
 Fastré, J. T. (Mewburn), 779, Mar. 14, Alarm for steam- [boilers.]
 Faulkner, R., 1642, May 30, Preparing photographs, &c. [for coloring.]
 — R., 1700, June 5, Printing photographs.
 — R., 3531, Nov. 25, Applying, &c. dry colors on [paper, &c.]
 Faull, E. (Lake), 3722, Dec. 7, Lubricating shafting, &c.
 Faure, C. A., 1740, June 10, Thermo-electric batteries.
 — C. A., 1742, June 10, Applying electric currents [to chemical decompositions, &c.]
 Faure, M. J. F. R., & Kessler, J. L. (Dufrené), 2205, [July 24, Concentrating and evaporating sul- [phuric acid, &c.]
 Faux, E., Campaign, S. W., & Perkins, T., 728, Mar. 9, [Cultivating land.]
 Favier, J. D. A. (Tongue), 1946, June 27, Artificial [flowers, fruits, &c.]
 Fawcett, T., & Coulter, J., 2129, July 15, Governors.
 Fayel, C. (Gedge), 2926, Oct. 4, Stereoscopic apparatus.
 Fearnley, W. G., 1461, May 14, Gas; heating rooms, &c.
 Feldtmann, E. (De Derschan), 820, Mar. 19, Heating, [&c. railway carriages.]
 — E. (Boloin), 1020, Apr. 6, Mandrel.
 Fell, J. C., 3118, Oct. 22, Rendering invisible exhaust [steam of engines.]
 Fellows, W. H., 2843, Sep. 26, Mouth piece for smoking.
 Fenby, J. B., 1276, Apr. 29, Regulating flow and pressure [of fluids.]
 — J. B., 3077, Oct. 18, Colour tops.
 Fenerty, E. L. (Cheesbrough), 3440, Nov. 18, Skate [fastening.]
 Fenn, A. G., & Umbers, E., 2039, July 5, Railway sig- [nalling.]
 Fenno, I., & Howe, P., 1871, June 21, Cutting cloth, &c.
 Fereday, H., 1829, June 18, Sifting seeds, coal, &c.
 — W. W., 3882, Dec. 21, Manure from sewage.
 Ferguson, P., Bates, F. G., & Baker, R. (Hughes), 179, [Jan. 19, Clutch for converting rotary to [reciprocating motion.]
 Fern, W., 2088, July 11, Saving fuel; consuming smoke.
 Féron, A. (Tongue), 2819, Sep. 24, Printed threads & fabrics.
 — G. F. (Daun), 1699, June 5, Phosphorus.
 Ferranti, C., & Turner, E. J., 3069, Oct. 17, Photographs.
 Ferrie, W., 2454, Aug. 17, Smelting furnaces.
 — W., 3008, Oct. 12, Applying gases for heating fur- [naces, &c.]
 Ferry, W., 1205, Apr. 22, Cistern filters.
 Fidler, J., & Richardson, W., 1230, Apr. 24, Cotton gins.
 — T. C., 1157, Apr. 18, Suspension bridges and iron [arches.]
 Field, A., 2652, Sep. 6, Candles.
 — E., & Cotton, F. M., 365, Feb. 5, Steam-engines.
 Field, G. B., & Andrews, E. W. (Lake), 828, Mar. 19, [Telegraphs.]
 — G. B., & Andrews, E. W. (Lake), 829, Mar. 19, [Telegraphs.]
 Field, J., 2523, Aug. 26, Hoes and other implements.
 — R., 3348, Nov. 11, Sewage tanks & siphon vessels.
 — R., & Denton, J. B., 742, Mar. 11, Filtering sewage [and irrigating.]
 Fielding, J., 1316, May 1, Rotary engines and pumps.
 — J., 1987, July 1, Signalling in trains.
 — J., 2301, Aug. 1, Signalling in trains.
 — J., & Duckworth, W., 1562, May 22, Railway [breaks.]

- Figatner, H., 1596, May 25, Galvanic batteries.
 Fillingham, S., & Pardoe, J., 3669, Dec. 4, Scouring, pre-paring, &c. fabrics.
 — S., Pardoe, J., & Wilkinson, J., 2961, Oct. 8, [Scouring, &c. yarns.
 — S., Pardoe, J., Glover, W., & Wilkinson, J., [3597, Nov. 29, Scouring, preparing, &c. yarns.
 Finlay, F., 1330, May 2, Applying asphalt.
 Firth, Sir C. H., E. & J., 1297, Apr. 30, Looms.
 — E., J. & Sir C. H., 1297, Apr. 30, Looms.
 — J., Sir C. H. & E., 1297, Apr. 30, Looms.
 — M., Bradley, C., Smith, B., Stake J., & Tolson, R., [700, Mar. 7, Combing fibres.
 — S., & Hurd, F., 1036, Apr. 8, Excavating machinery.
 — W., & Smith, P., 1766, June 11, Spinning & doubling.
 Fischer, F. A. (Prince), 3331, Nov. 9, Feeding steam-boilers, &c.
 Fish, R., 1362, May 4, Revivifying gas purifying materials.
 — W. S., 6, Jan. 1, Packing for piston rods, pipes, &c.
 — W. S., 2671, Sep. 9, Asbestos packing.
 — W. S., 2715, Sep. 13, Lamp wicks, &c.
 — W. S. (Mollory), 1303, May 1, Locking nuts on bolts.
 — W. S., & Wotherspoon, J., 7, Jan. 1, Yarns, threads, [and cordage.
 Fishburn, C. D. & I. P. (Millward), 2589, Aug. 31, [Sewing-machines.
 — I. P. & C. D. (Millward), 2589, Aug. 31, [Sewing-machines.
 Fisher, W. B. (Cheesbrough), 1948, June 27, Oil and oil [cake from seeds.
 Fisher, W. D., 2796, Oct. 10, Gas, &c.
 Fisen, T. R. H., 3175, Oct. 26, Steering ships, working [cranes, &c.
 Fison, J. P., 1368, May 4, Lifting and steering gear for [ploughs.
 Fitt, E. G., & Lawson, F. W., 568, Feb. 22, Preventing [accidents with driving belts.
 Fitt, G. W. (Johnson), 1417, May 9, Traction engines, &c.
 Fitts, D. G., & Molloy, B. C., 1376, May 6, Decom-posing compound substances, by electricity.
 — D. G., & Allen, W. T., 2208, July 24, Electro-deposition of metals, &c.
 Fitzhenry, E. (Lake), 764, Mar. 13, Working hides or [leather.
 Fitzmaurice, Hon. J. T., 1866, June 21, Lowering boats.
 — Hon. J. T., & Edgcumbe, R. J. F., 112, [Jan. 13, Tobacco cartridges.
 Fitzpatrick, B., 662, Mar. 4, Clipping animals.
 Flamaud, E. J., 3792, Dec. 14, Steam and other boilers.
 Fleming, A., Rawcliffe, J., & Bibby, W., 841, Mar. 20, [Spinning mules.
 — F., & Milner, J., 3337, Nov. 9, Flattening wire.
 — G. S., 1694, June 5, Bottle stoppers.
 Fletcher, C. & T., Kelly, M., & Morris, T., 1848, June 19, [Spring mattresses, &c.
 — G., & Brocklehurst, G., 326, Feb. 1, Sugar.
 — James, 1949, June 27, Forging and rivetting.
 — John, 549, Feb. 20, Packing for piston rods, &c.
 — John & S., 2297, Aug. 1, Yarn counters for mules.
 — Joseph (Ball), 2254, July 29, Eye cup.
 — S. & J., 2297, Aug. 1, Yarn counters for mules.
 — T. & C., Kelly, M., & Morris, T., 1848, June 19, [Spring mattresses, &c.
 Fletcher, J. W., Cutler, W. C., & Tirrell, J. P. (Lake), [2587, Aug. 30, Lighting burners.
 Fleury, F. G., & Tylor, A., 523, Feb. 17, Regulating flow [of liquids, &c.
 — F. G., & Tylor, A., 1180, Apr. 20, Water waste [preventers.
 — F. G., & Tylor, A., 1391, May 7, Measuring and [recording flow of liquids, &c.
 Flood, H. S., 2269, July 30, Corsets.
 Floyd, J. R., & Stancliff, G. (Clark), 1747, June 10, [Fastening lids of gas retorts.
 — J. R., Dieterich, C. F., & Schüssler, A. (Clark), [901, Mar. 25, Gas retorts.
 Floyd, T., 225, Jan. 24, Coverings for the head.
 Fogarty, T. B. (Haseltine), 2296, Aug. 1, Gas.
 Foley, F. S., 3566, Nov. 27, Collars, cuffs, &c.
 — J., 3198, Oct. 28, Half stuff and paper.
 Folk, J. E., & Wilson, C. F. (Clark), 2882, Sep. 30, [Bearings for spindles, &c.
 — J. E., & Wilson, C. F. (Clark), 3629, Dec. 2, [Spindle bolsters.
 Folkmann, J., & Kölgen, F. (Hughes), 639, Feb. 29, De-stroying snow and ice.
 Follows, F. W., Bate, J., & Edwards, S., 2949, Oct. 7, [Chaff cutting machines.
 Fondeville, E., Bertin, G., & Thwaites, W., 2003, July 2, [Glaze or coating for stone, &c.
 — E., Bertin, G., & Thwaites, W., 2004, July 2, [Composition for preserving walls, &c.
 Fontaine, C. D., & Laporte, E., 800, Mar. 16, Tobacco.
 Fontana, L., 1201, Apr. 22, Surgical and therapeutical [compositions.
 Foote, T. M., & Randall, C. A., 3368, Nov. 12, Telegraphic [printing.
 Forbes, H. V., & Lysons, L. G., 1634, May 30, Paints.
 — P., 3250, Nov. 2, Preserving food.
 Force, W. M., & Judson, A. (Cheesbrough), 1600, May 27, [Oil from seeds.
 Ford, A., 223, Jan. 24, Treating vegetable oils.
 — E. L., 3131, Oct. 23, Rotary printing machines.
 Ford, E. L. (Clark), 3572, Nov. 27, Printing, pressing, [and folding paper, &c.
 Ford, H. S., 3553, Nov. 26, Travelling bag.
 — J., 2673, Sep. 9, Working signals & switches, &c.
 Forde, F., 2946, Oct. 7, Clip-holder for springs of vehicles.
 Forest, T. B. de, 1564, May 22, Pins.
 — T. B. de, 1565, May 22, Sticking pins in paper.
 Forquignon, J. B. L., & Ehrmann, L. M. (Johnson), 2712, [Sep. 12, Purifying metals.
 Forrest, J. A., & Hayes, W. W., 3542, Nov. 26, Water- [closets.
 Forville, Marquis de (Schanschiff), 767, Mar. 14, Sig-nalling on railways.
 — Marquis de (Schanschiff), 769, Mar. 14, Tele-graphic signals and despatches.
 Foss, J. F., & Taft, G. E. (Johnson), 1345, May 3, Carding.
 Foster, H., 2551, Aug. 27, Condensers and refrigerators.
 — John, 2043, July 6, Twine and other cord.
 — John, 3749, Dec. 10, Removing carding refuse.
 — Joseph, 3435, Nov. 18, Printing & folding paper.
 Foster, Joseph S. (Lake), 387, Feb. 6, Explosive-power [engines.
 Fothergill, B., & Rumble, T. W., 668, Mar. 4, Fire and [burglar proof buildings, &c.
 — J., 63, Jan. 8, Fire-irons for kindling fires.
 Fottrell, J., 2881, Sep. 30, Val de Travers pavement.
 Foubert, S. (Bonneville), 1479, May 15, Two-wheeled [vehicles.
 Foulis, W., 1532, May 20, Exhauster & blower for gas, &c.
 Foureur, H., & Bruce, W., 3631, Dec. 3, Bottles.
 Fourquier, G., & Triquet, O., 3075, Oct. 18, Umbrellas.
 Foveaux, H. J. F. H., 74, Jan. 10, Scissors.
 — H. J. F. H., 3591, Nov. 29, Clinical thermometers.
 Fox, H. B., 201, Jan. 22, Filtering jugs.
 — H. B., 1427, May 10, Jugs for filtering and cooling.
 — H. B., & Wilde, J., 915, Mar. 26, Weeding lawns.
 — H. B., & Gurden, R. L., 2218, July 25, Draught and [dust guard for railway carriages, &c.
 — S., Tannett, J., Scott, J., & Craven, J., 660, Mar. 2, [Boring shaft couplings, &c.
 Foxwell, D., 1083, Apr. 12, Cards for carding engines.

- Fraise, P., 3818, Dec. 17, Cooking apparatus.
 France, J. W., 3060, Oct. 17, Combustion of fuel.
 — R., 3026, Oct. 14, Bottle stoppers.
 — W. H., 117, Jan. 15, Combing fibres.
 Frances, C., 427, Feb. 10, Privies and ash-pits.
 Francis, E. E. H., & Heaton, C. W., 765, Mar. 13, Fil-
 [tering liquids.
 — F. R., & Sykes, W. R., 3448, Nov. 19, Working
 [railway signals, &c.
 François, J., & Dubois, G. (Watteu), 1398, May 7,
 [Driving holes in rocks.
 Francotte, A. (Piddington), 1324, May 2, Fire-arms.
 Franklin, A. L., 2825, Sep. 24, Elastic fabric.
 Franklin, B. (Vaughan), 1902, June 24, Supplying air to
 [furnaces, stoves, &c.
 Franklin, F. M. (Pyne & Maurice), 332, Feb. 2, Capsules.
 Frary, J. D. (Hughes), 2307, Aug. 2, Bed bottoms.
 Fraser, A., 1060, Apr. 10, Distributing types.
 — A., 8461, Nov. 20, Composing types.
 — A. C., 2779, Sep. 19, Gas-retorts.
 Frazier, J. W. (Johnson), 144, Jan. 17, Cartridge boxes;
 [knapsacks.
 Frear, W. H., & Duffaud, L., 2797, Sep. 21, Transforming
 [vegetable fibres into cotton.
 Freeman, C. J., & Hawkes, T. B., 1633, May 30, Tables.
 Freeman, E. (Lake), 3119, Oct. 22, Top rolls for spinning.
 Frei, J. G., & Kember, G., 686, Mar. 6, Pumps.
 French, B., 1415, May 9, Lubricating.
 — G., Thompson, W. H., & Harris, E., 3522, Nov. 23,
 [Skates.
 Freutel, H. F., 2449, Aug. 16, Hats and caps.
 Fricker, J. (Millward), 1945, June 27, Street hydrants.
 Frickinger, C., 2527, Aug. 26, Malleable iron & furnaces.
 Friedmann, A., 254, Jan. 25, Producing circulation in
 [steam-boilers; collecting boiler precipitates.
 — A., 1034, Apr. 8, Collecting sediments of boilers.
 — A., 2271, July 30, Injectors for steam-boilers, &c.
 Froideville, F. L. T. de, 3190, Oct. 26, Mattresses for ships, &c.
 Froitzheim, J. A., 1509, May 17, Explosive compounds.
 Frye, J. (Brewer), 1011, Apr. 5, Railways & rolling stock.
 Fryer, A., 1477, May 15, Treating cane sugar.
 Fryer, R. McC. (Newton), 875, Mar. 22, Converting motions.
 Fulda, S., 448, Feb. 13, Clarifying impure water; manure.
 Fuller, T. H. (Morgan-Brown), 950, Mar. 30, Horse-shoe
 [nails, &c.
 — T. H. (Morgan-Brown), 1977, July 1, Horse-
 [shoe nails.
 — T. H. (Morgan-Brown), 2432, Aug. 15, Horse-
 [shoe nails.
 Fulton, L. C., 3361, Nov. 12, Steam-engines.
 Füngling, H., & Möller, A. (Johnson), 1077, Apr. 11,
 [Rotary steam-engines.
 Furlong, C., 808, Mar. 18, Files for holding papers.
 Furness, H. D., 2009, July 3, Weighing & lifting machines.
 — J. (Furness), 3452, Nov. 19, Metallic packing.
 Furness, J. C. (Furness), 3452, Nov. 19, Metallic packing.
 Furnevall, J., & Sieber, C. H., 17, Jan. 3, Dyeing yarns.
 Furon, C. A. (Bonneville), 237, Jan. 24, Forge bellows.
 Fyfe, A. L., 2316, Aug. 3, Scarf box or holder.
- G.**
- Gache, A. (Bonneville), 1290, Apr. 30, Medical injecting
 [or irrigating apparatus.
 Gahn, H., 1240, Apr. 25, Cosmetics.
 Gailbordt, L. (Abel), 3576, Nov. 28, Artificial fuel blocks.
 Gaillard, E., J. & J., & Vincenzi, E. (Clark), 2898,
 [Oct. 1, Punching jacquard cards.
 — J., J. & E., & Vincenzi, E. (Clark), 2898,
 [Oct. 1, Punching jacquard cards.
 Galand, C. F., 2308, Aug. 2, Revolving pistol.
 Gallagher, H., 551, Feb. 20, Hat bodies.
 Gallaher, R. H. (Morgan-Brown), 2064, July 9, Type-
 [wheels for printing-telegraphs.
 — R. H. (Morgan-Brown), 2073, July 10, Tele-
 [graph printing instruments.
 Galloway, G. B., 14, Jan. 3, Communicating in railway trains.
 Gally, G., Oswald, J., Feigner, F., & Menet, H., 3133,
 [Oct. 23, Imitation ceramic ware.
 — M., 2481, Aug. 21, Forms for printing.
 Gally, M. (Coddington), 1819, May 1, Printing presses, &c.
 Gamble, R., 161, Jan. 18, Stays and corsets.
 Ganter, J., & De Mignot, A. V., 1481, May 15, Com-
 [pressed gas engines.
 Gapiand, C. A. (Bonneville), 245, Jan. 25, Gas.
 Garbutt, W. F., 3679, Dec. 5, Brick, tiles, &c.
 Gardère, G. (Tongue), 2536, Aug. 26, Securing packing
 [cases.
 Gardner, E., 1249, Apr. 26, Lamps.
 — E. T., & Doty, H. H., 1233, Apr. 24, Lamps for
 [railway carriages.
 — H., 491, Feb. 16, Treating fibres.
 — H., & Allix, G., 916, Mar. 26, Bottle-stoppers, &c.
 — W., 2953, Oct. 7, Safes, cash boxes, &c.
 Garey, J. H., 1812, June 15, Cut nails.
 — W., 826, Mar. 19, Preparing photographic paper.
 Garforth, F., 3940, Dec. 28, Spinning and doubling.
 — J. H., & Lees, R. J., 2840, Sept. 26, Fuel
 [economisers.
 — J. H., & Lees, J., 3324, Nov. 9, Fuel economisers;
 [heating feed water.
 Garneri, J., 715, Mar. 8, Production, &c. of anhydrous
 [chlorides.
 Garnett, W. T., Wheeler, J., & Waring, W., 3906, Dec. 24,
 [Combing fibres.
 Garnier, F., & Hessenland, F. (Hunt), 1380, May 6,
 [Axles for vehicles.
 — F., & Hessenland, F. (Hunt), 1381, May 6,
 [Railway wheels.
 Garratt, A. C. (Hunt), 2483, Aug. 21, Physiological
 [battery.
 Garrood, A. F., 3603, Nov. 30, Furnaces and ovens.
 — G. W., & Hardmet, C., 51, Jan. 6, Signalling on
 [railways.
 Garside, W., & Waddington, J., 1484, May 15, Grate bars.
 Garton, W., 899, Mar. 25, Brewing.
 Gaskell, P., 190, Jan. 20, Drawing off liquids.
 — W., & Wright, J., 3201, Oct. 29, Seats & desks.
 Gaspar, F. R., 1538, May 21, Threading sewing-machine
 [needles.
 Gastineau, R., 2983, Oct. 10, Railway switches.
 Gateuil, J. N., 3258, Nov. 2, Calculating apparatus.
 Gateuil, J. N. (Newton), 366, Feb. 5, Diaries.
 Gathercole, J., 1627, May 29, Bricks, tiles, &c.
 Gatty, E. (Barlow), 2834, Sep. 25, Spanners and screw
 [keys.
 Gatty, F. A., 233, Jan. 24, Ventilating sewers, drains, &c.
 — F. A., 561, Feb. 21, Printing and dyeing fabrics.
 — F. A., 1312, May 1, Printing and dyeing fabrics.
 — F. A., 2692, Sep. 11, Dyeing fabrics, &c.
 Gaudefroy, C. (Gedge), 3712, Dec. 7, Waterproof and
 [anti-radiating fabric.
 Gauduin, O., Mignon, J. B. J., & Rouart, S. H. (Johnson),
 [3970, Dec. 31, Depositing copper and alloys.
 Gear, A. S. (Lake), 579, Feb. 22, Cutting, &c., marble
 [and stone.
 Gedge, W. E. (Welter), 433, Feb. 10, Horizontal boilers.
 — W. E. (Raimbault), 492, Feb. 16, Cleaning metals.
 — W. E. (Vigour), 587, Feb. 23, Rolling mills.
 — W. E. (Salmon), 626, Feb. 28, Manure; ammonia.
 — W. E. (Coulouvat), 952, Mar. 30, Jacks.
 — W. E. (Piau), 953, Mar. 30, Meters; motive power.

- Gedge, W. E. (*Hordé*), 964, Apr. 2, Spring mattresses.
 — W. E. (*Saint-Aubin*), 1047, Apr. 9, Feeding bottles.
 — W. E. (*Vigneau*), 1119, Apr. 15, Boots & shoes.
 — W. E. (*Tourenc*), 1120, Apr. 15, Raising vessels.
 — W. E. (*Chevallier*), 1255, Apr. 26, Draught apparatus for steam engines.
 — W. E. (*Radelet-Laurent & Son*), 1480, May 15, [Vertical hammers.
 — W. E. (*Petit-Toulouse*), 1737, June 8, Looms.
 — W. E. (*Peluche*), 1984, July 1, Phosphorus.
 — W. E. (*Brunel*), 1985, July 1, Shaping boots.
 — W. E. (*De Courson*), 2150, July 17, Splitting & [cutting wood.
 — W. E. (*Jourdeuil & Parisot*), 2322, Aug. 3, [Cordage and woven fabrics.
 — W. E. (*Rives*), 2324, Aug. 3, Portable pump.
 — W. E. (*Loir*), 2921, Oct. 3, Hydraulic engine.
 — W. E. (*Cornély*), 2922, Oct. 3, Sewing and embroiderying machine.
 — W. E. (*Fayel*), 2926, Oct. 4, Stereoscopic apparatus.
 — W. E. (*Louineau*), 2965, Oct. 8, Dominoes.
 — W. E. (*Vigneau*), 3021, Oct. 14, Boots & shoes.
 — W. E. (*Palau*), 3485, Nov. 21, Washing linen, &c.
 — W. E. (*Chambeaux*), 3605, Nov. 30, Gas cock.
 — W. E. (*Isnard*), 3659, Dec. 4, Preventing trains [leaving rails, &c.
 — W. E. (*Gaufrey*), 3712, Dec. 7, Waterproof [and anti-radiating fabric.
 — W. E. (*De Kercado*), 3766, Dec. 12, Gas motive [power engine.
 — W. E. (*Camus*), 3902, Dec. 24, Drawing board.
 Gelderd, T., & Naylor, B., 1239, Apr. 25, Tilting casks, &c.
 Gelstarp, C., & Gibb, T., 407, Feb. 8, Furnaces for [drying salts, &c.
 Genes, C. J., 241, Jan. 24, Pump pistons.
 Gengeman, S., 9, Jan. 1, Name-marking or number [branding casks, &c.
 George, B. G. (*Mayer*), 3777, Dec. 13, Capsule for [bottles, &c.
 Gerhard, F. W., & Light, J., 801, Mar. 16, Iron and steel.
 Gerike, J. H. A., 2869, Sep. 28, Governors.
 Gerland, B. W. (*Albert & Albert*), 2614, Sep. 3, Phosphoric acid, phosphates, &c.
 — B. W., & Johnson, E., 2569, Aug. 29, Sanitary [charcoal.
 Gasconini, L. (*De Tivoli*), 221, Jan. 23, Brushes and [brooms.
 Gibb, T., & Gelstarp, C., 407, Feb. 8, Furnaces for [drying salts, &c.
 Gibbs, T. B., 2742, Sep. 14, Fire grates and appliances.
 — W. A., & Borwick, A., 314, Jan. 31, Drying [substances.
 Gibou, E., Dusart, L., & Bardy, C., 812, Mar. 18, Converting starch into gum, &c.
 Gibson, A. W. (*Strachan*), 2799, Sep. 21, Iron ships.
 Gibson, J. & S., 753, Mar. 12, Sewing-machines.
 — S. & J., 753, Mar. 12, Sewing-machines.
 — T., 1922, June 25, Cutting lump sugar.
 — W., & Withy, E., 2672, Sep. 9, Puddling furnaces, [&c.
 — W., & Withy, E., 3252, Nov. 2, Mixing, smelting, [&c. ores.
 Giffard, P., 21, Jan. 3, Fire-arms and cartridges.
 Gilbee, W. A. (*Argall*), 41, Jan. 5, Steam water-heaters.
 — W. A. (*Jeely*), 1223, Apr. 24, Shells and shot.
 — W. A. (*Runquist*), 2615, Sep. 3, Governors.
 — W. A. (*Bazzichelli*), 2860, Sep. 28, Fuse for [shell.
 — W. A. (*Procopé*), 3051, Oct. 16, Harmoniums, &c.
 — W. A. (*Bosshard & Martin*), 3191, Oct. 28, Governors.
 Gilbert, E., 1753, June 11, Signalling in trains.
 Gilbert, G., Barnes, C., & Gwynn, G. (Newton), 995, [Apr. 4, Packings for steam-engines, &c.
 Giles, T., 891, Mar. 23, Safety-valves.
 Gilkerson, W., 535, Feb. 19, Liquid measures.
 Gill, W. E., 2261, July 29, Treating vegetable juices.
 Gillespie, J., & McColl, D., 2939, Oct. 5, Furnaces.
 Gillibrand, R. T., & Walmsley, J., 1958, June 28, Piecing [yarn for weaving.
 Gillies, J., 873, Mar. 22, Moulds for casting metals.
 Gillott, J., & Copley, P., 2000, July 2, Cutting coal, &c.
 — T., & Greig, D., 2302, Aug. 1, Cutting coal.
 Gilmore, A., 29, Jan. 4, Drag or brake for bobbins.
 — A. H., 58, Jan. 6, Preventing noise from and [breakage of jugs, &c.
 Gilsow, O., 3649, Dec. 4, Sofa or box ottoman.
 Gilyard, E., 330, Feb. 2, Lock furniture.
 Girardoni, A. (Lawson), 625, Feb. 28, Batching jute.
 Giroud, H., 1953, June 28, Gas regulator.
 Giory, T. (Tongue), 2519, Aug. 24, Needle and fancy [boxes, &c.
 Glaces et Produits Chimiques, Société Anonyme des [Manufactures (Johnson), 2220, July 25, Plate [glass.
 Glass, D., & Hopkin, D., 2102, July 12, Hansom cabs, &c.
 Glassie, M. H., Nash, J. C., & Armes, G. A. (Lake), [1957, June 28, Fastenings for bedsteads, &c.
 Glasspool, R. (Glasspool), 276, Jan. 29, Alarum, &c. for [flour mills.
 Glasspool, T. (Glasspool), 276, Jan. 29, Alarum, &c. for [flour mills.
 Glaysber, H., 1128, Apr. 16, Marine engines.
 Glaze, W., 3781, Dec. 13, Smelting furnace or cupola.
 Glazier, W., 3278, Nov. 5, Treating animal and vegetable [refuse.
 Gledhill, H., 2388, Aug. 10, Scouring fabrics.
 Gleig, H. L., 1807, June 15, Pianofortes.
 Gloeckner, B. (Newton), 3668, Dec. 4, Iron and steel.
 Glossop, G., & Cooper, H. E. L., 3113, Oct. 22, Steam [hammers.
 Glover, H., 698, Mar. 7, Magnetic attraction indicators.
 — J., 3132, Oct. 23, Spinning, doubling, &c.
 — R., 3150, Oct. 24, Lubricating axle-boxes.
 — W., & Sykes, H., 1426, May 10, Governors.
 — W., Wilkinson, J., Fillingham, S., & Pardoe, J., [3597, Nov. 29, Scouring, preparing, &c. yarns.
 Glydon, G. & W., 3120, Oct. 22, Steam-engines.
 — W. & G., 3120, Oct. 22, Steam-engines.
 Goddard, A. & A. E. (Haseltine), 2537, Aug. 26, Screw-taps.
 — A. E. & A. (Haseltine), 2537, Aug. 26, Screw-taps.
 Goffrié, C. F. L., & Schucht, J. H., 2445, Aug. 16, Piano [keys, &c.
 Gold, S. J. (Clark), 3397, Nov. 14, Air-heating furnace.
 Gold, W. H., 3211, Oct. 30, Reservoir pen cap.
 Goldsmith, G., & Dilkes, J., 3156, Oct. 24, Roasting, &c. [by gas.
 — G., & Dilkes, J., 3269, Nov. 4, Clearing gas pipes.
 Gombert, P. J. N., 409, Feb. 8, Railway breaks.
 Gomersall, J. & J. F., 2063, July 8, Reversible twill cloth.
 — J. F. & J., 2063, July 8, Reversible twill cloth.
 Gompertz, S., 3965, Dec. 31, Securing railway carriage [doors.
 Gonzalo, L. L. de, & Grisei, S. (Brandon), 82, Jan. 10, [Treating the tipha latifolia for upholstery, &c.
 Goodacre, F., 2878, Sep. 30, Leggings.
 Goodall, H. A., 2654, Sep. 6, Marker for bezique, whist, &c.
 — R., 2515, Aug. 24, Clarifying waste waters, &c.
 Goodfellow, J., 1487, May 16, Metallic pistons.
 Gooding, R. A., 1835, June 18, Measuring liquids.
 Goodrich, C. B., Locke, J. A., & Bailey, G. E. (Lake), [857, Mar. 21, Bakers' ovens.
 — P. F. (Haseltine), 3641, Dec. 3, Motive-power.

Goodyear, C. (Johnson), 996, Apr. 4, Sewing boots
[and shoes.]
Goold, G., 2182, July 22, Regulating draught, &c.
Göransson, E. F., 1155, Apr. 18, Motive-power.
Gordon, L. D. B. (Scheerer), 2434, Aug. 15, Iron and steel.
Gorga, R., 818, Mar. 19, Learning pronunciation of
[languages.]
Gorman, W., 2017, July 4, Iron & steel; furnaces; gases, &c.
Goss, W. H., 3129, Oct. 23, Moulding ceramic materials.
Gossage, W., 1442, May 11, Alkaline carbonates; car-
[bonic acid gas.]
Gottsberger, W. S., & Tappin, J. W. (Ollard & Barrow),
[1647, May 31, Playing cards.]
Goubet, D. (Brewer), 898, Mar. 25, Studs or buttons.
Gouéry, J. F., & Bigourat, J. (Henry), 2169, July 19,
[Measuring and indicating time.]
Gouldin, J., & Anderton, S. B., 3615, Nov. 30, Combining
[machinery.]
Goulding, J. (Morgan-Brown), 1270, Apr. 27, Steam-
[generators.]
Goulton, W., & Sharpe, C. D., 577, Feb. 22, Draining
[ploughs.]
Gowans, J., 87, Jan. 11, Preventing escape of sewer gases.
—— J., 978, Apr. 3, Tramways, railways, &c.
Gowland, E. B., 3019, Oct. 14, Pianofortes.
Grafton, S., 341, Feb. 2, Pocket match-holders.
Graham, B., 1161, Apr. 18, Feeding carding-engines.
—— D., 807, Mar. 18, Electric bells.
—— R., & Wood, M. D., 490, Feb. 16, Artificial teeth.
Grainger, G., 2556, Aug. 28, Tiles or slabs.
Gramme, Z. T., & D'Ivernois, E. L. C. (Johnson), 1254,
[Apr. 26, Magneto-electric machines.]
Grantham, J., 173, Jan. 19, Tramway carriages.
—— J., 3333, Nov. 9, Tramway carriages.
Granville, C. W., 605, Feb. 26, Paper-pulp.
Gravenastine, J., & Taylor, de W. C. (Johnson), 420,
[Feb. 9, Refrigerating.]
Gray, E., 2929, Oct. 4, Hydrostatic governors.
Gray, E., & Barton, E. M. (Haseltine), 3586, Nov. 28,
[Printing telegraphs.]
Gray, J. McF., 1735, June 8, Voting by ballot.
—— J. W. (Renoz), 1215, Apr. 23, Composition for
[paint, &c.]
—— J. W. (Hall), 2772, Sep. 19, Explosive compounds.
—— T., 1722, June 7, Treating fibres for paper.
—— Walton, & Peach, J., 3072, Oct. 17, Bird & animal
[traps.]
—— William, 721, Mar. 8, Rotary engines and pumps.
—— William, 744, Mar. 11, Steam-boilers.
Green, F. M., 3814, Dec. 17, Copying music.
—— R. E., & Lloyd, N., 1084, Apr. 12, Preparing yarns.
—— T., 3696, Dec. 6, Treating bones, &c.
—— U. (Utach), 2412, Aug. 13, Washing ores, &c.
—— W., 2560, Aug. 28, Saving fuel in houses.
—— W., & Jones, H., 1082, Apr. 12, Lowering, &c.,
[ships' boats.]
Greene, J., 1056, Apr. 10, Types, logotypes & phrasotypes.
Greener, J. H., & Sarney, T., S., 438, Feb. 12, Fasten-
[ing railway rails, &c.]
—— T., & Ellis, W., 2950, Oct. 7, Iron; fettling for
[furnaces.]
Greenhill, J. H., 131, Jan. 16, Disintegrating.
Greenhill, T., (Blumberg), 152, Jan. 18, Carriages.
Greenwood, A., 1715, June 6, Screw gill machinery.
—— A., (Veillon), 1716, June 6, Screw gill ma-
[chinery.]
—— F. A., & Asquith, S. E., 1000, Apr. 5, Spin-
[ning.]
Gregg, I., 3426, Nov. 16, Moulding bricks.
—— J. W., 528, Feb. 19, Lamps and lanterns.
—— S. G., & Evans, D., 771, Mar. 14, Road surfaces,
[bridges, pillars, &c.]

Greig, A. Mc.N., 3091, Oct. 19, Water closets & drains.
—— D., & Gillott, T., 2302, Aug. 1, Cutting coal.
—— D. & G., 3498, Nov. 22, Ploughs.
—— G. & D., 3498, Nov. 22, Ploughs.
Grell, A. (Lake), 1176, Apr. 19, Stearine and oleine.
Grether, E., 3290, Nov. 8, Sizing and dressing yarn.
Grierson, J. S., & Philips, R., 3494, Nov. 22, Applying
[bronze, &c., upon paper.]
Griffen, J., & Clarke, T. C., & Bonzano, A. (Johnson),
[2701, Sep. 11, Bridges & viaducts.]
Griffin, J. T. (Wood), 1300, Apr. 30, Reaping machines.
—— J. T. (Wood), 2607, Sep. 2, Reaping and mowing
[machines.]
Griffin, J. T., & Maquin, J. (White), 703, Mar. 7,
[Weaving shuttles.]
Griffiths, R., 1164, Apr. 19, Steam ships and propellers.
—— R., & Busby, W., 3089, Oct. 19, Indicating
[apparatus for public vehicles.]
Grimerd, E., 1430, May 10, Portmanteaus.
Grimshaw, W., 2353, Aug. 7, Hats, &c.
Grindrod, J., & Worthington, J., 640, Mar. 1, Dressing stone.
—— J., & Bailey, W. H., 3808, Dec. 16, Raising, &c.
[liquids.]
Grininger, F., Storck, H., Hentsch, E. & A., & Lutscher, A.
[(Browne), 2286, July 30, Treating phosphate, &c.]
—— F., Storck, H., Hentsch, E. & A., & Lutscher, A.
[(Lyte), 3552, Nov. 26, Acetate of alumina.]
—— F., Storck, H., Hentsch, E. & A., & Lutscher, A.
[(Lyte), 3585, Nov. 28, 1872, Treating phosphoric
[acid for phosphates.]
—— F., Decottegnie, A., Storck, H., Hentsch, E. & A.,
[& Lutscher, A. (Lyte), 3685, Dec. 5, Distilling, &c.]
Grinlinton, J. J. (Dawson), 724, Mar. 9, Preparing pro-
[ducts of coffee bush for food.]
Grisei, S. & De Gonzalo, L. L. (Brandon), 82, Jan. 10,
[Treating the tipha latifolia for upholstery, &c.]
Griswold, H. J., 693, Mar. 6, Knitting machines.
—— H. J., 2489, Aug. 21, Knitting machines.
Gros, E. le, (D'Silva), 2008, July 3, Drilling rocks, &c.
Grosfeld, P., Bennett, W. A., & Carman, A. B., (Lake)
[2818, Sep. 24, Sewing machine attachment.]
Grosvenor, H., 3447, Nov. 19, Cloth and imitation
[leather.]
Groussin, L. T., 1208, Apr. 23, Infants' cradles.
Grove, J., & Elwell, J. F., 2048, July 6, Safes.
Grumel, V., Palliser, J., McDowell, R., & Klopsk, A.
[(Weatherdon), 3231, Oct. 31, Bleaching fabrics, &c.]
Guay, L. A., 1631, May 30, Buttons.
Guérin, P. F., 2070, July 9, Horse shoes.
Guest, W., De Negri, C., & Herrmann, G., 736, Mar. 11,
[Hat bodies, sacks, &c.]
—— W., De Negri, C., & Herrmann, G., 2158, July 18,
[Braiding whips, &c.]
Gueury, F., & Dubois, E. (Clark), 2281, July 30, Fire-
[arms.]
Guichard, E. A. D., & Dupont, L. (Lake), 962, Apr. 1,
[Producing patterns on fabrics.]
Guillemare, A. F., & Du Lin, J. M. J. C. (Johnson),
[1410, May 8, Manure.]
Gulliver, G., 3942, Dec. 28, Spindles for locks, &c.
Günther, L. (Hughes), 1349, May 3, Piano-fortes.
Gurden, C. F., 2890, Oct. 1, Spring safety-valves.
—— R. L., & Fox, H. B., 2218, July 25, Draught and
[dust guard for railway carriages, &c.]
Gutteridge, G. T. W., 3697, Dec. 6, Carriage heads.
Guttmann, A. S., 1057, Apr. 10, Shade for omnibuses, &c.
Gwynn, G., Gilbert, G., & Barnes, C. (Newton), 995,
[Apr. 4, Packings for steam-engines, &c.]

H.

Haas, B., 2870, Sep. 30, Watches.

Hack, T., 1683, June 4, Pipe connections.

Hacker, F., & Richardson, F. (Lake), 786, Mar. 14, Boot
[and shoe heels.

— F., Blake, J. A., & Richardson, F. (Lake), 1175,
[Apr. 19, Filling metallic boot heel shells.

Hacking, T. & W. H., 1142, Apr. 17, Folding and measur-
[ing fabrics.

— T. & W. H., & Mallison, J., 2858, Sep. 28,
[Sizing and drying machines.

— W. H. & T., 1142, Apr. 17, Folding and measur-
[ing fabrics.

— W. H. & T., & Mallison, J., 2858, Sep. 28,
[Sizing and drying machines.

Hadfield, R., 2896, Aug. 12, Steel wheels; combining metals.

— R., 3524, Nov. 25, Wheels, axles and shafts.

Hadley, S. H., & Cardailhae, P., 2365, Aug. 8, Cleaning
[wheat, &c.

Haelelin, P. (Soul), 821, Mar. 19, Navigable balloons.

Haggart, A. McC., 604, Feb. 26, Envelopes.

Hahn, E., 3417, Nov. 16, Steel and iron; furnaces.

Haigh, B., Chadderton, J., & Allmark, J., 1262, Apr. 27,
[Cocks and water gauges.

Hail, N. B. (Lake), 717, Mar. 8, Cleaning cotton.

Hainisch, G. & M. (Johnson), 1076, Apr. 11, Preparing
[thread for dyeing.

— M. & G. (Johnson), 1076, Apr. 11, Preparing
[thread for dyeing.

Hainsworth, B., & Lawson, J., 919, Mar. 26, Ventilators.

Hainsworth, W. (Abel), 480, Feb. 15, Moulds, &c. for
[metal "castings."

Hale, J. (White & Hendry), 3930, Dec. 27, Liquid for
[illuminating.

Hale, W., 3188, Oct. 26, Rockets.

Haley, S. H. & T., 2744, Sep. 16, Steam-valve.

— S. H., S. & T., 2744, Sep. 16, Steam-valve.

— T., S. & S. H., 2744, Sep. 16, Steam-valve.

Hall, C. H., 2550, Aug. 27, Steam and water gauge.

— C. H., 2885, Oct. 1, Steam-pumps.

Hall, H. L. (Lake), 2223, July 25, Adjusting window
[blinds or shades.

Hall, J., 1445, May 11, Window sash fasteners.

Hall, J. (Gray), 2772, Sep. 19, Explosive compounds.

Hall, R., & Hobson, J., 1701, June 5, Looms.

Hall, T. (Livsey), 3219, Oct. 31, Vices.

Hallam, S., 3539, Nov. 25, Raising or forcing fluids.

Hamel, F. J., 1392, May 7, Moulding fuel, &c.

Hamer, W., 630, Feb. 29, Salt.

Hamilton, J., 474, Feb. 15, Sewing-machines.

— J., 2685, Sep. 11, Tramway carriages, &c.

— J., & Paterson, R., 3061, Oct. 17, Soldering bolts.

— J., & Paterson, R., 3078, Oct. 18, Aërating
[and transferring liquids.

Hamilton, S. M. (Lake), 1655, May 31, Brick kilns.

Hamilton, W. T., 3704, Dec. 6, Producing and transmit-
[ting motions.

— W. T., 3738, Dec. 9, Working engine valves, &c.

— W. T., 3756, Dec. 11, Cutting dovetails.

Hamit, G., 3764, Dec. 11, Draining land.

Hamman, W., 1338, May 2, Propelling carriages.

Hammer, G. M., 2978, Oct. 10, School desks, &c.

Hammond, H. W. (Petot & Salmon), 622, Feb. 28, Awning
[for vehicles, &c.

— W. H., 2762, Sep. 18, Fastenings for stays.

Hampson, R. H., 2938, Oct. 4, Waste for cleaning en-
[gines, &c.

Hampton, T., 1837, June 18, Bessemer steel ingots.

Hancock, H. R. (Mathews), 2051, July 6, Dressing ores.

Hanctin, J. O., 987, Apr. 4, Grinding & mixing sand, &c.

Handcock, E. R., 16, Jan. 3, Railway signals.

Hanna, D., 637, Feb. 29, Sewing-machines.

Hannart, L. J., & Aubertin, N. A. (Clark), 3441, Nov. 18,
[Walking sticks.

Hannay, T., 230, Jan. 24, Rolling iron.

Hanscom, W. W., 181, Jan. 19, Applying power to
[traction engines, &c.

Hansen, R. M., & Jürgensen, C. P. (Holten), 823, Mar. 19,
[Writing instruments.

Hanson, R., 1644, May 30, Steam-boilers.

— R., 3346, Nov. 11, Steam-engines.

— R., & Norton, J., 3613, Nov. 30, Steam-boilers.

Harding, G. E. (Lake), 2443, Aug. 15, Puddling furnaces.

Hardmet, C., & Garrood, G. W., 51, Jan. 6, Signalling on
[railways.

Hare, G. S., & Stuart, C., 3359, Nov. 12, Steam-boiler tube
[stopper.

Harfield, W. H., 483, Feb. 15, Windlasses & chain controllers.

— W. H., 2512, Aug. 23, Multiplying power in
[windlasses, &c.

Hargreaves, J., & Robinson, T., 508, Feb. 17, Chlorine
[and hydro-chloric acid.

— J., & Robinson, T., 509, Feb. 17, Alkalies.

— J., & Robinson, T., 2573, Aug. 29, Hydro-
[chloric acid.

— J., & Robinson, T., 2596, Aug. 31, Salt.

— J., & Robinson, T., 2704, Sep. 12, Sulphate
[of soda.

— J., & Robinson, T., 2982, Oct. 10, Alkalies.

— J., & Robinson, T., 3032, Oct. 15, Treating
[sulphides.

— J., & Robinson, T., 3052, Oct. 16, Sulphates
[of soda and potassa.

Harling, E. J., 81, Jan. 10, Electric telegraphs.

— E. J., 3779, Dec. 13, Telegraph keys and com-
[mutators.

Harman, H. W., 3825, Dec. 17, Gun turrets.

Harper, J. M., & Martin, T. J., 2828, Sep. 25, Compound
[steam-engines.

— J. R., 3233, Nov. 1, Blow-pipe apparatus.

— J. W., 1144, Apr. 17, Hammock-beds.

— T. H., 75, Jan. 10, Needle receptacles.

Harper, T. J. (Lake), 2237, July 26, Sewing-machine
[and button-hole attachment.

Harpin, H., & Coulter, J., 959, Apr. 1, Dressing stone, &c.

Harrass, B. (Mewburn), 913, Mar. 26, Cigarettes.

Harrington, G. (Newton), 1751, June 10, Perforating
[paper for telegraphic messages.

Harrington, J., 3959, Dec. 31, Artificial leather.

Harris, A., 3327, Nov. 9, Fire-arms.

Harris, A. (Strauss), 745, Mar. 11, Indicating height of
[bilge water.

Harris, E., French, G., & Thompson, W. H., 3522, Nov. 23,
[skates.

— I. B., 1609, May 27, Moulding india-rubber
[valves, &c.

— I. B., 2867, Sep. 28, Packing piston rods.

Harris, John (Lake), 1783, June 13, Rotary pumps and
[engines, &c.

— John (Lake), 2188, July 22, Raising liquids, grain,
[&c.; rotary engines.

Harris, Joseph, & Normington, D., 397, Feb. 7, Bedstead
[joints, &c.

— M. M. (Lyman), 1568, May 22, Wheel hubs.

Harris, S. W. (Newton), 308, Jan. 31, Smelting furnaces.

Harris, W. R., & Holding, J., 1960, June 29, Loom
[bealds.

Harrison, A. H. & C. W., 735, Mar. 9, Heating and
[cooking.

— A. H. & C. W., 1679, June 3, Gas.

- Harrison, A. H. & C. W., 1708, June 5, Gas.
 — A. H. & C. W., 2847, Sep. 26, Combining
 [air and gases.
 — A. H. & C. W., 3473, Nov. 20, Charging air
 [with vapour.
 Harrison, Bros., & Co. (Harrison), 2532, Aug. 26, Oxi-
 [dizing metals.
 Harrison, C. E., 3472, Nov. 20, Warming rooms.
 — C. W., 3523, Nov. 23, Heating water; genera-
 [ting steam.
 — C. W. & A. H., 735, Mar. 9, Heating and
 [cooking.
 — C. W. & A. H., 1679, June 3, Gas.
 — C. W. & A. H., 1708, June 5, Gas.
 — C. W. & A. H., 2847, Sep. 26, Combining air
 [and gases.
 — C. W. & A. H., 3473, Nov. 20, Charging air
 [with vapour.
 — F. A. & Priestland, C., 1127, Apr. 16, Attach-
 [ing knobs to spindles.
 — H., 3288, Nov. 6, Artificial fuel.
 — H. D., 2371, Aug. 9, Kiln for burning bricks, &c.
 Harrison, James (Timbrill), 390, Feb. 7, Gloves and
 [mittens.
 Harrison, John G., 719, Mar. 8, Steps for carriages.
 — John H., & Ellington, E. B., 3812, Dec. 16,
 [Hydraulic cylinders & rams.
 — John H., Johnson, B., & Ellington, E. B.,
 [3650, Dec. 4, Raising & transporting loads.
 Harrison, Joseph (Johnson), 1758, June 11, Locomo-
 [tives and carriages.
 Harrison, R. J., 3715, Dec. 7, Carriage heads.
 — T., 77, Jan. 10, Manure and seed drills.
 — T. S., 2531, Aug. 26, Sewing machine attach-
 [ment.
 — T. S. (Hoyer), 2530, Aug. 26, Sewing machine
 [attachment.
 — T. S. (Harrison, Bros. & Co.), 2532, Aug. 26,
 [Oxidizing metals.
 — W., 3205, Oct. 29, Glass knobs for doors, &c.
 — W. S., & Rotter, C. G., 334, Feb. 2, Regis-
 [tering votes.
 Harrold, H. E., 3400, Nov. 15, Coupling for shafting.
 Harrop, J. J., & Corbett, W., 1723, June 7, Puddling &
 [puddling furnaces.
 Hart, A. H., 2306, Aug. 1, Fasteners for papers, &c.
 — J. & W., 3734, Dec. 9, Drying sewage, cement
 [pulp, &c.
 — J. M., & Hobbs, A. C., 1611, May 28, Safes, safe
 [doors & fastenings, &c.
 — W. & J., 3734, Dec. 9, Drying sewage, cement
 [pulp, &c.
 Hartley, F. W., 2236, July 26, Gas regulators.
 — J., 35, Jan. 4, Shuttles for weaving.
 — J., & Sugden, Z., 1698, June 5, Boilers for
 [heating buildings.
 — J., & Sugden, Z., 1910, June 24, Boilers for
 [heating buildings, &c.
 Hartley T. (Browne), 1110, Apr. 13, Lamps.
 Hartley, W., & Kay, J. C., 2999, Oct. 11, Steam-engines.
 Harvey, C., 3746, Dec. 10, Washing, wringing and man-
 [gling.
 — C. R., & Randolph, C., 2407, Aug. 13, Tramway
 [cars.
 — J., 2644, Sep. 5, Sugar.
 — J., & Stephens, H., 1124, Apr. 16, Treating ores.
 — W. T., 3754, Dec. 11, Oil lamps.
 Harvie, W., 1915, June 25, Lenses and lamps.
 Haseltine, G. (Osborne), 537, Feb. 19, Rakes of harvesters.
 — G. (Middleton), 1801, June 14, Iron & steel.
 — G. (Alexander), 2282, July 30, Converting
 [cast iron into steel.
 Haseltine, G. (Fogarty), 2296, Aug. 1, Gas.
 — G. (Woods), 2321, Aug. 3, Reed organs.
 — G. (Tanner), 2329, Aug. 3, Cigars.
 — G. (Dodge), 2397, Aug. 12, Adjusting screw
 [propellers and rudders.
 — G. (Osborn), 2414, Aug. 13, Holder for scrub-
 [bing brushes, &c.
 — G. (Sanderson), 2435, Aug. 15, Railway car-
 [riage springs.
 — G. (Bantz), 2440, Aug. 15, Boiler furnaces.
 — G. (Imhorst), 2442, Aug. 15, Chamber-vessels.
 — G. (Stewart), 2488, Aug. 21, Treadles.
 — G. (Sanderson), 2492, Aug. 22, Railway car-
 [riage springs.
 — G. (Moses), 2493, Aug. 22, Curative electrical
 [apparatus.
 — G. (Goddard & Goddard), 2537, Aug. 26,
 [Screw-taps.
 — G. (La Monte, Saxe & Clayton), 2670, Sep.
 [9, Colored and figured paper.
 — G. (Shedd), 2994, Oct. 10, Sewing books, &c.
 — G. (Boomer), 3510, Nov. 23, Lever and screw
 [press.
 — G. (Coles & Coles), 3583, Nov. 28, Sewing-
 [machines.
 — G. (Gray & Barton), 3586, Nov. 28, Printing
 [telegraphs.
 — G. (Manson), 3601, Nov. 30, Motor for sewing-
 [machines, &c.
 — G. (Goodrich), 3641, Dec. 3, Motive-power.
 — G. (Spooner), 3693, Dec. 6, Meters.
 — G. (Morong), 3759, Dec. 11, Wood-pavements.
 — G. (Craven), 3843, Dec. 18, Rendering, &c.
 [animal matter; deodorising; treating blood.
 — G. (Morrill), 3844, Dec. 18, Sewing-machines.
 — G. (Bradley), 3910, Dec. 24, Trip hammers.
 — G. (Peple), 3958, Dec. 30, Breaking rags.
 Hasenclever, R. (Price), 3370, Nov. 12, Annealing wire.
 Hastie, J., 431, Feb. 10, Steering ships.
 Hatch, J. V., 3769, Dec. 12, Magic-lantern slide holder.
 Hatchman, W., & Johnson, F., 815, Mar. 18, Umbrella
 [fabrics.
 Hattersley, R., 552, Feb. 21, Distributing type.
 Hautrive, B. A. L., 1295, Apr. 30, Drawing & sketching.
 Hawke, F., 3847, Dec. 18, Press copies of manuscripts,
 [preparing paper.
 Hawker, J., 1177, Apr. 19, Traction & portable engines.
 Hawkes, T. B., & Freeman, C. J., 1633, May 30, Tables.
 Hawkins, E., 2713, Sep. 13, Chronometers, &c.
 Hawksley, G. W., & Wild, M., 3207, Oct. 30, Safety
 [valves.
 Hawley, J. P., 2264, July 29, Cocks and sluices.
 Haworth, G. A., 3662, Dec. 4, Slide-valves.
 — J., 3242, Nov. 1, Tramways.
 Haycraft, G., 1554, May 22, Pebble gunpowder.
 Hayes, E., 2564, Aug. 28, Tilling land.
 — E., 2669, Sep. 9, Reaping and mowing machines.
 Hayes, M. P. (Benson), 802, Mar. 16, Brine heaters,
 [pans, &c.
 Hayes, W. W., & Forrest, J. A., 3542, Nov. 26, Water-
 [closets.
 Hayman, J., 1688, June 4, Brushes.
 Hayne, B., 3214, Oct. 30, Forming cutting blocks.
 Haythorn, J., & Paul, M., 1939, June 27, Steering ap-
 [paratus.
 Hayward, J. R. S., 2996, Oct. 10, Galvanic belt for cu-
 [rative purposes.
 Hazeldine, F., 2912, Oct. 3, Multitubular boilers.
 Head, J., & Brown, T. C., 3197, Oct. 28, Steam-engines
 [for burning straw, &c.
 Heald, J., 1784, June 13, Door fastener.
 Healey, B. D., 85, Jan. 11, Iron and steel; furnaces.

Heaselden, J., 2694, Sep. 11, Twist-lace machines.
 Heath, T. E. & T. E., & Evens, T., 2123, July 13, Artificial fuel.
 ——— T. E. & T. E., & Evens, T., 2125, July 13, Compressing by hydraulic power.
 ——— T. E. & T. E., & Evens, T., 3644, Dec. 3, Compressing materials.
 Heaton, C. W., & Francis, E. E. H., 765, Mar. 13, Filtering liquids.
 Heaton, D. (Bousfield), 1591, May 25, Combination tool.
 ——— D. (Bousfield), 2707, Sep. 12, Lacing wearing apparel, &c.
 Heberlein, J., 1071, Apr. 11, Working railway brakes.
 Heberlein, J. (Imray), 1508, May 17, Railway brakes.
 ——— J. (Imray), 1849, June 19, Railway brakes, &c.
 Hébert, J., 3651, Dec. 4, Folding frame for baskets, &c.
 Hebson, D., 1292, Apr. 30, Steering gear.
 Hédard, A. (Clark), 436, Feb. 10, Propelling vessels.
 Hedley, G. H. C., 817, Mar. 19, Fire lighters.
 ——— G. H. C. & T. A., & Smith, W., 3300, Nov. 7, [Gas].
 ——— T. A. & G. H. C., & Smith, W., 3300, Nov. 7, [Gas].
 Heegaard, A. (Jensen), 2022, July 4, Furnaces & steam boilers.
 Heilmann, P. (Clark), 757, Mar. 12, Changing loom shuttles.
 Heine, A., Huntly, W. W., & Holcomb, A. P. (Benson), 3705, Dec. 7, Cleaning middling.
 Heinemann, L., & Müller, M. L., 2768, Sep. 18, Composing type.
 Helbronner, A. (Durand), 3785, Dec. 13, Sluices.
 ——— A. (Durand), 3800, Dec. 14, Hydraulic foundations.
 Helle, L. A. M. (Brosse), 882, Mar. 22, Bottling, &c. cider.
 Heltmore, F., 1824, June 17, Case for reading and writing in vehicles.
 Hellingway, S., 3465, Nov. 20, Packing dry soap, starch, &c.
 Hemp, C. (Ashbury), 974, Apr. 3, Propelling & steering vessels.
 Henderson, A. C. (Chapusot), 926, Mar. 27, Distilling and filtering fecal matters for ammonia, &c.
 ——— A. C. (Pillet), 1842, June 19, Stereoscopes.
 ——— A. C. (Lalouette), 2253, July 29, Save-all for candlesticks, &c.
 ——— A. C. (Demailly), 3820, Dec. 17, Sewing kid gloves, &c.
 ——— A. C. (Demailly), 3852, Dec. 19, Filtering & defecating water.
 ——— A. C. (Saint Anne), 3900, Dec. 24, Match box.
 ——— James, 554, Feb. 21, Iron and steel.
 ——— James, 2318, Aug. 3, Converting cast iron into steel, &c.
 ——— John, 2689, Sep. 11, Cleaning printers' rollers.
 ——— John C. A., 3684, Dec. 5, Skirts or petticoats.
 ——— N. M., & Cook, E. A., 422, Feb. 10, Treating hydro-carbon oils.
 ——— T., 514, Feb. 17, Screw steamers.
 ——— T., 2509, Aug. 23, Supplying fuel to furnaces, &c.
 ——— W. & Boyd, J., 261, Jan. 26, Weaving hair cloth.
 ——— W. C., 1518, May 18, Fixing panes of glass.
 Hendry, P. T., & White, B. (Hale), 3930, Dec. 27, Liquid for illuminating.
 Hendryx, A. B., & Webster, A. W. (Hughes), 869, Mar. 22, Converting motion.
 Hengst, C. F., & Muschamp, J. B., 1752, June 11, Gas.
 Henley, J. E., 2627, Sep. 4, Bird-cages.

Henley, T. F., 3772, Dec. 12, Warming beds and couches.
 Henman, C., 396, Feb. 7, Baths.
 Hennings, C., Von, 3628, Dec. 2, Extract from mountain ash berries.
 Henry, A., 2540, Aug. 26, Fire-arms.
 ——— A., 3727, Dec. 9, Fire-arms.
 ——— M. (Dupa), 1310, May 1, Reeds, sleys or combs.
 ——— M. (Peltier & Paillard), 1336, May 2, Boxes.
 ——— M. (Gouéry & Bigourat), 2169, July 19, Measuring and indicating time.
 ——— M. (Pinel & Lecœur), 2500, Aug. 22, Preparing fibres.
 ——— M. (Bellotti & Petvini), 2794, Sep. 20, Propelling ships.
 ——— M. (Bourdin), 2903, Oct. 2, Sewing-machines.
 ——— M. (Rogers), 2987, Oct. 10, Sustaining and insulating telegraph wires.
 ——— M. (Ehrmann), 3692, Dec. 6, Preserving ships' sheathing, &c.
 Henson, W. F., & Poole, H., 1424, May 10, Textile fabrics.
 Hentsch, A. & E., Lutscher, A., Grininger, F., & Storck, H. (Browne), 2286, July 30, Treating phosphate, &c.
 ——— A. & E., Lutscher, A., Grininger, F., & Storck, H. (Lyte), 3552, Nov. 26, Acetate of alumina.
 ——— A. & E., Lutscher, A., Grininger, F., & Storck, H. (Lyte), 3585, Nov. 28, Treating phosphoric acid for phosphates, &c.
 ——— A. & E., Lutscher, A., Grininger, F., Decottegnie, A., & Storck, H. (Lyte), 3685, Dec. 5, Distilling, &c.
 ——— E. & A., Lutscher, A., Grininger, F., & Storck, H. (Browne), 2286, July 30, Treating phosphate, &c.
 ——— E. & A., Lutscher, A., Grininger, F., & Storck, H. (Lyte), 3552, Nov. 26, Acetate of alumina.
 ——— E. & A., Lutscher, A., Grininger, F., & Storck, H. (Lyte), 3585, Nov. 28, Treating phosphoric acid for phosphates, &c.
 ——— E. & A., Lutscher, A., Grininger, F., Decottegnie, A., & Storck, H. (Lyte), 3685, Dec. 5, Distilling, &c.
 Hentschel, A., & Denne, T. J., 1347, May 3, Dyeing and printing fabrics.
 ——— A., & Denne, T. J., 1348, May 3, Finishing and currying leather.
 ——— A., & Denne, T. J., 1373, May 6, Preserving meat.
 ——— A., & Denne, T. J., 2385, Aug. 10, Waterproofing.
 ——— A., & Denne, T. J., 2429, Aug. 15, Stiffening, dyeing, and printing fabrics, &c.
 Hepburn, G., 1129, Apr. 16, Governors.
 Hepple, E., 2128, July 15, Motive-power.
 Hepworth, H. & J., 53, Jan. 6, Spinning.
 ——— J. & H., 53, Jan. 6, Spinning.
 Herman, R., & Boone, J. L., 1590, May 24, Permanent way of railways, &c.
 Herrick, S. K. (Bousfield), 1016, Apr. 5, Machine treadles.
 Herrmann, G., Guest, W., & De Negri, C., 736, Mar. 11, Hat bodies, sacks, &c.
 ——— G., Guest, W., & De Negri, C., 2158, July 18, Braiding whips, &c.
 ——— L., & Laurent, A., 1041, Apr. 8, Lamp shades.
 Herveux, C., 1521, May 18, Tanning.
 Herzberg, A. & I. (Johnson), 3210, Oct. 30, Umbrellas and parasols.
 ——— I. & A. (Johnson), 3210, Oct. 30, Umbrellas and parasols.
 Heshuysen, W. F., 519, Feb. 17, Fluid regulator.
 Hess, R. (Smith), 1206, Apr. 22, Buttons.
 Hessenland, F., & Garnier, F. (Hunt), 1380, May 6, Axles for vehicles.
 ——— F., & Garnier, F. (Hunt), 1381, May 6, Railway wheels.
 Hetherington, J. J., & Benson, W., 972, Apr. 3, Washing, &c., ores.

- Heusser, H.* (Brookes), 3181, Oct. 26, Ordnance.
Heyer, F. H. A., 1204, Apr. 22, Printing & copying presses.
Heyes, G., *Entwistle, T.*, *Wilson, P.*, & *Hunter, J.*, 2400, [Aug. 12, Warping machines.
Heyl, — & Schultz, — (Brunner), 3470, Nov. 20, Annealing, &c. metals.
— H. R., & Brehmer, A. (Mills), 2291, July 31, Match boxes, &c.
Hibbert, J., *Cheetham, J.*, & *Turner, R.*, 2352, Aug. 7, Hats.
Hibell, W., 1624, May 29, Annealing pots.
Hicken, T., 1085, Apr. 12, Sheafing and binding corn.
Hickman, J. W., 2928, Oct. 4, Taps or cocks.
Hicks, J. J., 2555, Aug. 28, Infants' feeding bottles.
Hicks, J. M. (Prince), 3268, Nov. 4, Steam-boilers.
Hickson, S., 3799, Dec. 14, Preserving meat.
Hies, F., & *Bauer, G.* (Prince), 1283, Apr. 29, Tobacco pipes and cigar tubes.
Higgin, J., & *Stenhouse, J.*, 3949, Dec. 30, Arseniates [and phosphates.
Higginson, A., 202, Jan. 22, Engines, governors & pumps.
Highton, H., 4, Jan. 1, Electric telegraphs.
— H., 485, Feb. 15, Galvanic batteries.
— H., 1279, Apr. 29, Electric cables.
— H., 1428, May 10, Electric telegraphs.
— H., 1638, May 30, Galvanic batteries.
— H., 2547, Aug. 27, Electric cables.
Hignette, J. J. (Johnson), 750, Mar. 12, Separating or [sorting substances.
Hildesheim, J., 78, Jan. 10, Fresh water from sea water ice.
Hiler, S. (Lake), 1847, June 19, Copper-coated or cored [wire.
Hill, C. G., 986, Apr. 3, Goffering and crimping fabrics.
— C. G., 2154, July 18, Goffering and fluting fabrics.
— E. J., 242, Jan. 24, Boat detaching apparatus.
— E. J., & Clark, J. L., 1193, Apr. 20, Boat-lowering- [apparatus.
— G. S., 2839, Sep. 25, Motive-power.
— H. C., 2097, July 11, Paving roads, &c.
— H. C., 2568, Aug. 29, Horse-shoes.
— J. W., 65, Jan. 8, Ploughs.
— L., 2725, Sep. 13, Regulating speed of engines.
— S., 8732, Dec. 9, Refrigerators.
Hillé, F., 484, Feb. 15, Manure.
Hilles, M. W., 3739, Dec. 9, Steam-boilers.
Hillman, H., 3364, Nov. 12, Sewing-machines.
Hills, E., & *Biggs, B.*, 3464, Nov. 20, Treating sewage, &c.
Hinchliff, J., 1705, June 5, Printing.
Hinde, T. C., 222, Jan. 24, Iron and steel.
Hinton, F., 522, Feb. 17, Collars for draught animals.
Hird, J., & *Ensor, E.*, 3071, Oct. 17, Stopper for bottles, &c.
Hirsch, H., 1305, May 1, Ships and vessels.
Hitchcock, A. (Lake), 405, Feb. 7, Combining earthy [with vegetable substances for parchment, &c.
Hitchcock, R., 3579, Nov. 28, Removing steam-boiler tubes.
Hitchin, E., & *Williamson, W. B.*, 2465, Aug. 19, Fasten- [ings for boxes, &c.
— W., 3162, Oct. 25, Roller-blind ends.
Hoadley, T., 3081, Oct. 18, Lamps.
Hobbs, A. C., & *Hart, J. M.*, 1611, May 28, Safes; safe [doors and fastenings, &c.
Hobson, J., & *Hall, R.*, 1701, June 5, Looms.
Hodgart, J., & *Jones, C.*, 88, Jan. 11, Baling cotton, &c.
Hodge, R. R. & *W. R.*, 1344, May 3, Steam-boilers.
— W. R. & R. R., 1344, May 3, Steam-boilers.
Hodges, J. F., 1965, June 29, Preparing bankers' [cheques, &c.
— S. H., 733, Mar. 9, Boots and shoes.
Hodgetts, R. G., & *Lawson, E.*, 2679, Sep. 10, Metallic [bedsteads, &c.
Hodgkinson, J., & *Thornley, T.*, 1317, May 1, Bobbin and [fly frames for preparing fibres.
Hodgson, C., 418, Feb. 9, Wire tramways.
Hodgson, J. A., 447, Feb. 13, Driving screw-propeller [shafts.
— W. E., 976, Apr. 3, Bread & farinaceous food.
— W. S., 1719, June 7, Dressing & finishing leather.
Hodkinson, J., & *Clarke, D.*, 2884, Oct. 1, Laths for [window-blinds, &c.
Hoe, R. M. (Newton), 45, Jan. 5, Printing machinery.
— R. M. (Newton), 545, Feb. 20, Lithographic printing.
— R. M. (Newton), 1109, Apr. 13, Type cases.
— R. M. (Newton), 2561, Aug. 28, Printing machines.
Hoefelmann, G. (Brookes), 3700, Dec. 6, Motive-power.
Hogel, H. A., & *Bigelow, H. B.* (Tongue), 2115, July 13, [Manures.
Holbrook, W., 2052, July 6, Window fasteners, &c.
Holcomb, A. P., *Heine, A.*, & *Huntly, W. W.* (Benson), [3705, Dec. 7, Cleaning middling.
Holcroft, G., & *Lackersteen, J. F.*, 1155, Apr. 18, Sepa- [rating metals from ores, &c.
— J. T., 3456, Nov. 19, Water-waste preventers.
Holden, E., 44, Jan. 5, Combing fibres.
— E., 2730, Sep. 13, Preparing fibres.
— E., *Lones, J. C. & J.*, & *Vernon, C.*, 3884, [Dec. 21, Carriage axles.
— J., 716, Mar. 8, Pavement.
— R. W., & *Truswell, W.*, 2477, Aug. 20, Heating [and supplying air to furnaces, &c.
Holding, J., & *Harris, W. R.*, 1960, June 29, Loom healds.
Holdsworth, S., 2095, July 11, Looms.
Holker, S., 3851, Dec. 18, Treating straw, &c. for paper.
Holland, D., & *Taylor, G. L.* (Lake), 1575, May 23, [Stoning raisins, &c.
Holland, H., 378, Feb. 5, Clipping animals.
— W., & *Cox, T.*, 2907, Oct. 2, Umbrellas & parasols.
— W., & *Cox, T.*, 2962, Oct. 8, Umbrellas & parasols.
Hollands, E. R., *Maker, W.*, & *Jefferies, C. H.*, 1663, [June 1, Fluid meters.
Hollefreund, H., 880, Mar. 22, Treating potatoes, &c. for [products.
Hollick, T. P., 1672, June 3, Marine engines and boilers.
Hollingworth, M. H., 229, Jan. 24, Boots and shoes, &c.
Hollinshead, W., & *Holmes, W. C.*, 1235, Apr. 25, Gas.
Holloway, F., 1561, May 22, Embossing & cutting press.
Holman, S., 1531, May 18, Raising and lowering heavy [bodies.
— S., 3428, Nov. 16, Raising heavy bodies; forcing [fluids.
Holman, S. (Richards), 3297, Nov. 6, Marking instruments.
Holmes, C., & *Sims, J.*, 3042, Oct. 15, Heating buildings.
— F. R., J. & G. T., 1993, July 2, Elevating and [stacking hay, &c.
— G. T., F. R. & J., 1993, July 2, Elevating and [stacking hay, &c.
— James, G. T. & F. R., 1993, July 2, Elevating [and stacking hay, &c.
— John, 1544, May 21, Coats and waistcoats.
— John, 2339, Aug. 6, Building.
— Joseph E., 923, Mar. 27, Motive-power; pistons [for same.
— W. C., & *Hollinshead, W.*, 1235, Apr. 25, Gas.
Holt, H. P., 1725, June 7, Locomotives for tram cars, &c.
— H. P., 3869, Dec. 20, Locomotive engines.
— J., 2857, Sep. 28, Drawing wire.
Holten, S. E. (*Hansen & Jürgensen*), 823, Mar. 19, [Writing instruments.
Holzmann, P., *Barthel, P.*, & *Capitaine, F.* (Prince), [3886, Dec. 21, Asphalt for paving.
Honell, H. F. (Benson), 799, Mar. 16, Washing, &c., oils.
Hookham, A., 1938, June 27, Money tills.
Hooper, F. E. E., 2749, Sep. 17, Utilizing motive-power [of water, &c.
Hopcraft, T., & *Davis, G. D.*, 2089, July 11, Working [rudders.

Hope, W., 3885, Dec. 21, Steam cultivation.
 Hopkin, D., & Glass, D., 2102, July 12, Hansom cabs, &c.
 Hopkins, W., & Picking, G. G., 3236, Nov. 1, Steam
 [cylinders.
 Hopkinson, J., 2170, July 20, Revolving lights of light-
 [houses.
 — J. & J., 859, Mar. 21, Street lamps.
 — J. T., 3339, Nov. 9, Window-sash fastener.
 Hopps, R., Johnson, D., & Simpson, R. W., 1929, June 26,
 [Scribbling wool, &c.
 Hopson, —, & Allen, — (Cropper), 1757, June 11, Ink
 [fountains for printing presses.
 Horack, C. L. (Lake), 1576, May 23, Railway couplings.
 Hordé, H. (Gedge), 964, Apr. 2, Spring mattresses.
 Horn, L. Von (Pelly), 3330, Nov. 9, Peat fuel.
 Hornby, R., 3445, Nov. 19, Lubricating compound.
 Hornsby, R., Phillips, J. E., & Innocent, J., 2364, Aug. 8,
 [Reaping and mowing.
 — R., Phillips, J. E., & Innocent, J., 3289, Nov. 6,
 [Reaping and mowing.
 Horsey, J. G., 1874, June 21, Brushes and brooms.
 Horsley, J., 1885, June 22, Explosive compound; firing
 [same.
 Horton, J., 2408, Aug. 13, Cooling the tools of lathes, &c.
 — T. R., 3286, Nov. 6, Steel converters, moulds, &c.
 Hoskins, E., 2524, Aug. 26, Spring-mattresses and
 [bedsteads.
 Hotchkiss, B. B., 207, Jan. 23, Wood-pavements.
 Hatchkiss, B. B. (Lake), 345, Feb. 2, Wood-pavement.
 — B. B. (Lake), 346, Feb. 2, Wood-pavement, &c.
 — B. B. (Morgan-Brown), 3065, Oct. 17, Ord-
 [nance and cartridges.
 — H. L. (Hughes), 2916, Oct. 3, Sewing-machine
 [attachment.
 Hough, J., 1712, June 6, Coupling, &c. railway wagons.
 Houghton, A. B., 1597, May 25, Printing.
 Houghton, C. (Morgan-Brown), 2268, July 30, Raising
 [water.
 Houghton, F. B., 3853, Dec. 19, Paper-pulp.
 Houghton, G. H. (Coone), 3875, Dec. 21, Filling moulds
 [with clay, &c.
 House, J. A. (Bousfield), 710, Mar. 8, Sewing-machines.
 Houston, E., 1863, June 20, Heating and ventilating.
 Houston, C., 2872, Sep. 30, Regulating speed of engines.
 How, R. G., 1926, June 25, Indicating, &c. speed of trains.
 Howard, James, & Bousfield, E. T., 889, Mar. 23, Ploughs, &c.
 — James, & Bousfield, E. T., 905, Mar. 25, Steam-
 [boilers.
 — James, & Bousfield, E. T., 1405, May 8, Ploughs, &c.
 — James, & Bousfield, E. T., 3516, Nov. 23, Steam
 [cultivating.
 — James H., & Pace, E., 1285, Apr. 29, Cutting splints.
 — Joseph, & Burn, R., 3592, Nov. 29, Railway
 [crossings.
 Howe, M., 3528, Nov. 25, Boot and shoe heels.
 — P., & Fenno, L., 1871, June 21, Cutting cloth, &c.
 Howe Machine Co. (Stockwell), 401, Feb. 7, Sewing-
 [machines.
 — Machine Co. (Stockwell), 1191, Apr. 20, Attach-
 [ments for sewing-machines.
 Howes, S., Babcock, A. & N., & Ewell, C. (Benson), 2192,
 [July 23, Smut machine and grain separators.
 Howland, T. A., & McKnight, C. G., 3502, Nov. 22, Gas.
 Howlett, F., & Clayton, H. & H., 2975, Oct. 9, Treating
 [peat.
 Howson, R., & Thomas, J. J., 136, Jan. 17, Puddling
 [furnaces.
 — R., & Thomas, J. J., 839, Mar. 20, Puddling
 [furnaces.
 Hoyer, J. W. (Harrison), 2530, Aug. 26, Sewing-machine
 [attachment.
 Hubbard, W. A., 1471, May 15, Levels.

Huch, E. H., 985, Apr. 3, Coffee pots.
 — E. H., 2535, Aug. 26, Cooking and coffee pots.
 Huddart, G. A., 3879, Dec. 21, Railway brakes.
 Hudson, F. W., 543, Feb. 20, Releasing, &c. roller-blinds.
 — T., Walker, W., & Robson, J., 2348, Aug. 7,
 [Sheathing for ships.
 — W. S., 2295, July 31, Locomotive engines.
 Huebscher, H. (Wise), 1374, May 6, Musical instruments.
 Huet, J. B. (Clark), 1678, June 3, Eyelets for boots, &c.
 Huggett, J. & J. A., 3037, Oct. 15, Horse-nails.
 — J. A. & J., 3037, Oct. 15, Horse-nails.
 Hughes, A., 2468, Aug. 19, Reaping and mowing.
 — A., 3595, Nov. 29, Reaping machines.
 — E. T. (Bates, Baker & Ferguson), 179, Jan. 19,
 [Clutch for converting rotary to reciprocating
 [motion.
 — E. T. (Parker), 180, Jan. 19, Locks of fire-arms.
 — E. T. (De Labarre), 191, Jan. 20, Preparing
 [wool for spinning.
 — E. T. (Baldwin), 590, Feb. 23, Sewing boots
 [and shoes.
 — E. T. (Folkman & Kölgen), 639, Feb. 29,
 [Destroying snow and ice.
 — E. T. (Hendryx & Webster), 869, Mar. 22,
 [Converting motion.
 — E. T. (Günther), 1349, May 3, Piano-fortes.
 — E. T. (Bichroux), 1598, May 25, Furnaces.
 — E. T. (Trowbridge), 1652, May 31, Safety valves.
 — E. T. (Frery), 2307, Aug. 2, Bed bottoms.
 — E. T. (Parker), 2325, Aug. 3, Dressing litho-
 [graphic stones.
 — E. T. (Pistor & Ciacher), 2422, Aug. 14, Cigars.
 — E. T. (Wernz), 2423, Aug. 14, Sifting machine.
 — E. T. (Clervaux), 2430, Aug. 15, Cigars, &c.
 — E. T. (Langen), 2456, Aug. 17, Loaf sugar.
 — E. T. (Steuer, Boughton & Newton), 2688, Sep. 11,
 [Driving loom shuttles.
 — E. T. (Daudenart & Verbert), 2745, Sep. 16,
 [Baryta and strontia.
 — E. T. (Daudenart & Verbert), 2746, Sep. 16,
 [Treating greasy and washing liquors, &c.
 — E. T. (Wilbans), 2833, Sep. 25, Printing, im-
 [pressing, or enamelling on paper, &c.
 — E. T. (Schultze), 2889, Oct. 1, Opening, &c.
 [solid, liquid, and aeriform matters.
 — E. T. (Krochmann), 2895, Oct. 1, Jointing, &c.
 [railway rails.
 — E. T. (Hotchkiss), 2916, Oct. 3, Sewing machine.
 — E. T. (Stute), 3203, Oct. 29, File cutting machine.
 — E. T. (Systermans), 3406, Nov. 15, Weighing
 [contents of vehicles.
 — E. T. (Winslow), 3424, Nov. 16, Goring for boots.
 — E. T. (Errani & Anders), 3481, Nov. 21,
 [Motive-power.
 — E. T. (Mallett Manufacturing Co.), 3832, Dec. 18,
 [Making needles.
 — E. T. (Mallett Manufacturing Co.), 3920, Dec. 26,
 [Scouring, &c., needles.
 — E. W., 2832, Sep. 25, Tramways and carriages.
 — G. D., 2157, July 18, Governors.
 — H., 15, Jan. 3, Trimmings.
 — H., 206, Jan. 23, Scarves and neckties.
 — H. W., 2660, Sep. 7, Trainways.
 — J. G., 1433, May 11, Propelling ships.
 — J. S., & Spooner, C. E., 1315, May 1, Motive-
 [power for railways and tramways.
 — N. H., 936, Mar. 28, Cultivating land.
 — T., Maddox, J., & Dixon, G., 1526, May 18,
 [Cutting arrangements for looms.
 Hulme, G., 1794, June 14, Felted cloth for floors.
 — G. & S. F., 372, Feb. 5, Covering for floors.
 — S. F. & G., 372, Feb. 5, Covering for floors.

Hulse, W., 195, Jan. 20, Metallic bedsteads, cots, [chairs, &c.
 — W. W., & McKay, B. T., 381, Feb. 6, Floor-cloth.
 Hunt, B. (*Sickels & Thorndike*), 83, Jan. 10, Fluid-meters.
 — B. (*McCrea*), 450, Feb. 13, Postal cards.
 — B. (*Thompson*), 512, Feb. 17, Pottery-ware.
 — B. (*Simonds*), 529, Feb. 19, Stiffenings for boots.
 — B. (*White*), Feb. 22, 572, Leather.
 — B. (*Scholz*), 1004, Apr. 5, Indicating speed of [trains, &c.
 — B. (*Garnier & Hessenland*), 1380, May 6, Axles [for vehicles.
 — B. (*Garnier & Hessenland*), 1381, May 6, Railway [wheels.
 — B. (*Rebour*), 1711, June 6, Motive-power machine.
 — B. (*Wehrlin*), 1903, June 24, Clipping animals.
 — B. (*Reynolds*), 2207, July 24, Dentistry.
 — B. (*Bray*), 2406, Aug. 13, Refrigerating.
 — B. (*Garratt*), 2483, Aug. 21, Physiological battery.
 — B. (*Riley*), 2761, Sep. 18, Producing ice.
 — B. (*Wells & Zell*), 2915, Oct. 3, Printing and [ornamenting.
 — James, 3775, Dec. 12, Gunpowder.
 — John, 1199, Apr. 22, Winding thread or yarn.
 — W. F., & Bigg, E. S., 2795, Sep. 20, Plaited paper [cups, &c.
 Hunter, A., & Osborn, E. H. (Johnson), 3486, Nov. 21, [Seed separators.
 — J., Wilson, P., Heyes, G., & Entwistle, T., 2400, [Aug. 12, Warping machines.
 Hunter, T., 2680, Sep. 10, Implements for lifting potatoes.
 — W., & McCloy, R., 2661, Sep. 7, Spinning, &c.
 Huntly, W. W., Holcomb, A. P., & Heine, A. (Benson), [3705, Dec. 7, Cleaning middling.
 Huppe, — & Bender, — (Pfeiffer), 3482, Nov. 21, Lock [for bags, &c.
 Hupton, H. E., & Durham, F., 1238, Apr. 25, Indicating [or checking apparatus.
 Hurd, F., & Firth, S., 1036, Apr. 8, Excavating machinery.
 — F., & Simpson, E. T., 2106, July 12, Compressing air.
 — F., & Simpson, E. T., 3241, Nov. 1, Excavating coal, &c.
 Husband, W., 2315, Aug. 3, Steam hammers & stampers.
 Hutchinson, E. S. (Mills), 1140, Apr. 17, Extracting [oil, fat, resin, &c.
 Hutchinson, W., 3931, Dec. 27, Washing machines.
 — W. N., 2160, July 18, Railways, engines, [and carriages.
 Hüttemeier, C. E., & Bergmann, J. J. (Browne), 1052, [Apr. 9, Glove sewing-machine.
 Hutton, Richard, 2184, July 22, Furnaces.
 — Robert, 2275, July 30, Stove pipes.
 — W. R., & Russell, J., 794, Mar. 15, Obtaining zinc.
 — W. S., 236, Jan. 24, Forge hammers, stamps, &c.
 Hyatt, J. S. & J. W. (Lake), 3101, Oct. 21, Pyroxyline [or gun cotton.
 — J. W. & J. S. (Lake), 3101, Oct. 21, Pyroxyline [or gun cotton.
 Hyatt, T., 25, Jan. 3, Fire and burglar proof roofs, sky- [lights, &c.
 — T., 40, Jan. 5, Revolving shutters.
 Hyde, O., 2127, July 15, Steam traction waggons, &c.

I.

Ibbetson, S. K., 3312, Nov. 8, Cigarettes.
 Icely, W. S. (Gilbee), 1223, Apr. 24, Shells and shot.
 Imhorst, F. (Haseltine), 2442, Aug. 15, Chamber-vessels.
 Imray, J., 1354, May 3, Interlocking points and signals.

Imray, J. (*Brockmann & O'Ryan*), 1489, May 16, [Means of transit across rivers, &c.
 — J. (*Heberlein*), 1508, May 17, Railway brakes.
 — J. (*Blair*), 1589, May 24, Iron and steel.
 — J. (*Blair*), 1795, June 14, Iron and steel.
 — J. (*Heberlein*), 1849, June 19, Railway brakes, &c.
 — J. (*Denayrouze*), 2142, July 17, Supporting re- [spiration and light in mines, &c.
 — J. (*Sulzer, Sulzer & Ernst*), 2193, July 23, Steam [cylinder valves.
 Industrielle Suisse Société (Johnson), 3955, Dec. 30, [Fire-arms.
 Ingham, J., 1116, Apr. 15, Looms.
 — J., & Shaw, W., 1535, May 20, Looms.
 — O., 2475, Aug. 20, Loom pickers.
 Inglis, J. (Johnson), 1266, Apr. 27, Examining and [repairing submerged parts of ships.
 Innocent, J., Hornsby, R., & Phillips, J. E., 2364, Aug. 8, [Reaping and mowing.
 — J., Hornsby, R., & Phillips, J. E., 3289, Nov. 6, [Reaping and mowing.
 Inwood, T., 1670, June 3, Balancing two-wheel vehicles.
 Ireland, J. & W. (*Pink*), 429, Feb. 10, Steel ingots.
 — W. & J., (*Pink*), 429, Feb. 10, Steel ingots.
 Ironside, P., 1125, Apr. 16, Raising, &c. carriage steps.
 Irvine, R., & Mackintosh, J., 1604, May 27, Paper stock.
 Irving, T., 11, Jan. 2, Controlling draught of furnaces.
 Irwin, J. H. (Benson), 3695, Dec. 6, Tubular lamps.
 Isaacs, T. I., & Breavington, W. G. K., 1301, Apr. 30, [Organs.
 Isherwood, T. (Nuttall), 531, Feb. 19, Loom shuttles.
 Isnard, J. (Gedge), 3659, Dec. 4, Preventing trains [leaving rails.
 Ivernois, E. L. C. D', & Gramme, Z. T. (Johnson), 1254, [Apr. 26, Magneto-electric machines.
 Ivory, T., 3682, Dec. 5, Heating, &c. liquids; generating [steam.

J.

Jackson, C., 814, Mar. 18, Sewing-machine shuttles.
 — C., 1153, Apr. 18, Sewing-machines.
 Jackson, E. (Johnson), 3387, Nov. 13, Ships.
 Jackson, F., 2272, July 30, Slide-valves.
 — F., 2273, July 30, Slide-valves.
 — G., 2653, Sep. 6, Horse-clippers, &c.
 Jackson, G. P., Blessing, J. H., & Townsend, F. (Ed- [wards), 1139, Apr. 17, Steam-traps.
 Jackson, H., & Milburn, R., 2266, July 30, Drying and [pulverising.
 — John B., & Bentley, D., 1346, May 3, Machine [cylinders or drums.
 — Joseph B. & R., 1601, May 27, Cutting files.
 — R. & J. B., 1601, May 27, Cutting files.
 — R. B., 3427, Nov. 16, Bottle racks.
 — T., & Southan, T., 2690, Sep. 11, Fettingling for [furnaces.
 — W., 1311, May 1, Sewing-machines.
 — W., & Zamoyiski, J. M., 1782, June 13, Axles [and crank shafts for railway engines, carriages, &c.
 — W., & Zamoyiski, J. M., 3458, Nov. 20, Railway [engines; carriages, &c.
 James, C., 3771, Dec. 12, Exhausting & propelling air, &c.
 — G. F., 2298, Aug. 1, Fuses.
 James, H. B. (Wilkinson), 1496, May 16, Time-keepers.
 James, J., 1337, May 2, Cartridge cases.
 — J. M., 3934, Dec. 27, Locks for purses, bags, &c.

James, W. G., 778, Mar. 14, Traps for drains.
 Jaques, J. A., & Banks, J., 305, Jan. 31, Surgical instruments.
 — J. A., & Oakley, J. T., 546, Feb. 20, Grinding, &c.
 [iron and steel articles.
 — J. A., & Oakley, J. T., 851, Mar. 20, Working
 [iron and steel articles.
 Jarman, H., & Mitchell, G., 338, Feb. 2, Heating ovens,
 [boilers, &c.
 Jarosson, L., & Pack, J. J. M. (Morgan-Brown), 1710,
 [June 6, Dyeing.
 Jaynor, A., 2361, Aug. 8, Artificial stone for paving, &c.
 — A., 3735, Dec. 9, Automatic telegraphs.
 — A., & Low, M., 1467, May 14, Steam-boilers and
 [furnaces.
 Jean, R. (Ray), 2178, July 20, Motive-power.
 Jebb, T. A. (Lake), 1889, June 22, Check-tickets.
 Jefferies, C. H., Hollands, E. R., & Maker, W., 1663,
 [June 1, Fluid meters.
 Jefferson, C., L., M. & J., 862, Mar. 21, Combing fibres.
 — J., C., L. & M., 862, Mar. 21, Combing fibres.
 — L., M., J. & C., 862, Mar. 21, Combing fibres.
 — M., J., C. & L., 862, Mar. 21, Combing fibres.
 Jenkins, M. F., 1106, Apr. 13, Sheath for crochet needles.
 — W., 2148, July 17, Rolling leather.
 Jenkinson, J., & Dickson, A., 175, Jan. 19, Leather.
 Jenner, R. F. L., 3505, Nov. 23, Dinas fire bricks.
 Jennings, E. W. (Craig), 3230, Oct. 31, Telegraphing.
 Jensen, P. (Mortensen), 791, Mar. 15, Boring through
 [earth, &c.
 — P. (Erichsen & Maardt), 1122, Apr. 15, Coke
 [ovens; refined salt.
 — P. (Erichsen & Maardt), 1423, May 10, Coke
 [ovens, &c.
 — P. (Steinbrenner), 1474, May 15, Bridge piers,
 [wharves, docks, &c.
 — P. (Heegaard), 2022, July 4, Furnaces and steam-
 [boilers.
 — P. (Brooks), 3477, Nov. 21, Steel.
 Jessop, J. B., 2892, Oct. 1, Fire-lighters.
 Jewitt, H. (Rose), 1971, June 29, Toys.
 Jeyes, J., 1506, May 17, Fuel.
 Joannon, F. A. (Johnson), 526, Feb. 19, Liqueurs or cordials.
 — F. A. (Johnson), 971, Apr. 2, Liqueurs or cordials.
 Jobbins, W. F., & Warth, A. (Lake), 536, Feb. 19, Cutting
 [fabrics, &c.
 — W. F., & Warth, A. (Bonneville), 2517, Aug. 24,
 [Cutting textile materials.
 Jobson, R., 1961, June 29, Supports for telegraph insulators.
 — R., & Clark, R. D., 256, Jan. 25, Ships' compasses.
 Johns, F. C. (Lake), 1332, May 2, Metallic springs.
 Johnson, C. G. (Newton), 1780, June 12, Self-cancelling
 [stamps, &c.
 Johnson, Alfred, & S., 1198, Apr. 22, Plumb-rule & level.
 — Asa, 732, Mar. 9, Rolling metal.
 — B., Ellington, E. B., & Harrison, J. H., 3650,
 [Dec. 4, Raising and transporting loads.
 — C. G., 929, Mar. 27, Iron and steel.
 — D., 1455, May 13, Treating grain or seed.
 — D., Simpson, R. W., & Hopps, R., 1929, June 26,
 [Scribbling wool, &c.
 — Edmund, G., 3463, Nov. 20, Punching paper,
 [tickets, &c.
 — Edward, & Gerland, B. W., 2569, Aug. 29, Sani-
 [tary charcoal.
 — Edwin, & Oldroyd, J. & M., 1444, May 11,
 [Textile fabrics.
 — F., & Hatchman, W., 815, Mar. 18, Umbrella fabrics.
 — I. C., 1583, May 23, Cements.
 — J. H. (Sellers & Sellers), 50, Jan. 6, Regene-
 [rating heat.
 — J. H. (Sellers), 59, Jan. 8, Melting furnaces.

Johnson, J. H. (Sellers), 80, Jan. 10, Discharging molten
 [metal; casting same.
 — J. H. (Blondin), 103, Jan. 12, Treating, &c. acid
 [gas tars.
 — J. H. (Frazier), 144, Jan. 17, Cartridge boxes;
 [knapsacks.
 — J. H. (Tucker), 310, Jan. 31, Fluting or crimping.
 — J. H. (Arson), 312, Jan. 31, Mariners' compasses.
 — J. H. (Roswag & Pauville), 313, Jan. 31, Sepa-
 [rating gold and silver from lead.
 — J. H. (Nes), 325, Feb. 1, Iron and steel.
 — J. H. (Lawrence), 339, Feb. 2, Nail machines.
 — J. H. (Caldwell), 340, Feb. 2, Burning hydro-
 [carbons.
 — J. H. (Leconte), 404, Feb. 7, Alcoholic liquors, &c.
 — J. H. (Buzby), 419, Feb. 9, Steam-generators.
 — J. H. (Gravenstine & Taylor), 420, Feb. 9,
 [Refrigerating.
 — J. H. (Ponsard Metallurgical Society), 424,
 [Feb. 10, Furnaces for zinc ores.
 — J. H. (Ponsard Metallurgical Society), 426,
 [Feb. 10, Treating zinc ores, &c.
 — J. H. (Joannon or Antonin), 526, Feb. 19,
 [Liqueurs or cordials.
 — J. H. (Reckendorfer), 578, Feb. 22, Stamped
 [lead pencils, &c.
 — J. H. (Robin & Malo), 610, Feb. 26, Asphalt
 [roads.
 — J. H. (Lebeuf), 650, Mar. 1, Damping paper, &c.
 — J. H. (Whipple & Whipple), 657, Mar. 2, Nails.
 — J. H. (Ruggieri), 674, Mar. 5, Night signalling.
 — J. H. (Hignette), 750, Mar. 12, Separating or
 [sorting substances.
 — J. H. (Lamarre), 827, Mar. 19, Fireworks and
 [signals.
 — J. H. (Tingley), 914, Mar. 26, Ice-cream freezers.
 — J. H. (Vitali), 948, Mar. 30, Railways.
 — J. H. (Joannon), 971, Apr. 2, Liqueurs or cor-
 [dials.
 — J. H. (Adamson), 973, Apr. 3, Treating hair
 [bristles, &c.
 — J. H. (Goodyear), 996, Apr. 4, Sewing boots
 [and shoes.
 — J. H. (Ponsard Metallurgical Society), 1018,
 [Apr. 5, Heating.
 — J. H. (Adamson), 1051, Apr. 9, Treating animal
 [and vegetable substances.
 — J. H. (Hainisch & Hainisch), 1076, Apr. 11,
 [Preparing thread for dyeing.
 — J. H. (Füngling & Möller), 1077, Apr. 11,
 [Rotary steam-engines.
 — J. H. (Barret & Verdreau), 1121, Apr. 15,
 [Files, rasps, &c.
 — J. H. (Gramme & D'Ivernois), 1254, Apr. 26,
 [Magneto-electric machines.
 — J. H. (Inglis), 1266, Apr. 27, Examining and
 [repairing submerged parts of ships.
 — J. H. (Wilson), 1302, Apr. 30, Steel.
 — J. H. (Douglas), 1329, May 2, Disengaging
 [ships' boats.
 — J. H. (Foss & Taft), 1345, May 3, Carding.
 — J. H. (Wells), 1382, May 6, Treating grain.
 — J. H. (Peillon), 1383, May 6, Treating coal;
 [artificial fuel.
 — J. H. (Ponsard Metallurgical Society), 1409,
 [May 8, Treating ores.
 — J. H. (Du Lin & Guillemare), 1410, May 8,
 [Manure.
 — J. H. (Fitts), 1417, May 9, Traction engines, &c.
 — J. H. (Mills & Taylor), 1470, May 14, Shoes.
 — J. H. (Durafort), 1495, May 16, Cocks or
 [valves for aerated liquids.

- Johnson, J. H. (*Bly*), 1693, June 5, Applying coloring [or mucilaginous solutions.
 — J. H. (*Harrison*), 1758, June 11, Locomotives [and carriages.
 — J. H. (*Lemaire & Sonnois*), 1791, June 14, [Separating volatile & condensable gases.
 — J. H. (*Sellers*), 1799, June 14, Iron.
 — J. H. (*Wells*), 1800, June 14, Seasoning wood.
 — J. H. (*Albaret*), 1826, June 17, Reaping and [mowing.
 — J. H. (*Cabanes*), 1944, June 27, Sifting or [bolting machines.
 — J. H. (*Enault & Co.*), 1951, June 28, Pre-[serving butter, &c.
 — J. H. (*Nezeraux*), 2054, July 8, Cooling air [and gases.
 — J. H. (*Société Anonyme des Manufactures des Glaces et Produits Chimiques*), 2220, [July 25, Plate glass.
 — J. H. (*Piccard*), 2280, July 30, Water-meters.
 — J. H. (*Brand*), 2433, Aug. 15, Propelling boats.
 — J. H. (*Wilson Sewing Machine Co.*), 2441, [Aug. 15, Sewing-machines.
 — J. H. (*Ponsard Metallurgical Society*), 2480, [Aug. 21, Supplying hot blast to furnaces.
 — J. H. (*Bergner*), 2585, Aug. 30, Parallel rulers.
 — J. H. (*Renaux*), 2624, Sep. 4, Water-closets.
 — J. H. (*Clarke, Bonzano & Griffen*), 2701, [Sep. 11, Bridges and viaducts.
 — J. H. (*Forquignon & Ehrmann*), 2712, Sep. 12, [Purifying metals and alloys.
 — J. H. (*Chamoûin*), 2714, Sep. 13, Portfolio.
 — J. H. (*Liogier*), 2944, Oct. 5, Shingling and [drawing hammers.
 — J. H. (*Rand & Waring*), 3125, Oct. 23, Rock [boring or drilling.
 — J. H. (*Wheeler*), 3130, Oct. 23, Metal tubes [and bars.
 — J. H. (*Purvis*), 3171, Oct. 25, Ginning cotton.
 — J. H. (*Magnier, Pouilly, Brunet & Co., & Pré-vost*), 3196, Oct. 28, Spinning fibres.
 — J. H. (*Herzberg & Herzberg*), 3210, Oct. 30, [Umbrellas and parasols.
 — J. H. (*Ward*), 3386, Nov. 13, Pipe-joints.
 — J. H. (*Jackson*), 3387, Nov. 13, Ships.
 — J. H. (*Mignon & Rouart*), 3422, Nov. 16, [Freezing; regulating flow of liquids.
 — J. H. (*Hunter & Osborn*), 3486, Nov. 21, Seed [separators.
 — J. H. (*Douglas*), 3554, Nov. 26, Detaching [ships' boats.
 — J. H. (*Dodge*), 3619, Dec. 2, Spools.
 — J. H. (*Vreeland*), 3947, Dec. 30, Wheels for [vehicles.
 — J. H. (*La Société Industrielle Suisse*), 3955, [Dec. 30, Fire-arms.
 — J. H. (*Leconte*), 3956, Dec. 30, Starch, paper [pulp, &c. from maize.
 — J. H. (*Dodge*), 3969, Dec. 31, Boots & shoes.
 — J. H. (*Gauduin, Mignon & Rouart*), 3970, [Dec. 31, Depositing copper and alloys.
 — J. R., & Shanks, P. M., 3074, Oct. 17, Printing.
 — B., 293, Jan. 31, Drying & superheating steam.
 — R. J., 2126, July 15, Ventilating sewers.
 — Samuel H., 3014, Oct. 12, Separating soluble [substances from insoluble.
 — Sarah & A., 1198, Apr. 22, Plumb-rule & level.
 — Sidney, 3483, Nov. 21, Straining hops; pre-[serving casks.
 — T., 472, Feb. 14, Sewer valves.
 — W. J., 3148, Oct. 24, Condensing, &c. smoke [and vapors.
- Johnston, A. (*Lake*), 1937, June 26, Sewing-machine [attachments.
 — S. (*Lake*), 1827, June 17, Harvesters.
 — S. (*Lake*), 1828, June 17, Harvesters.
 — Johnstone, J., & Torr, C. W., 2642, Sep. 5, Furnaces.
 — Jolliffe, H., 1979, July 1, Heating and cooling food.
 — Jones, C., & Hodgart, J., 88, Jan. 11, Baling cotton, &c.
 — Jones, D., & Wyatt, W. P., 3128, Oct. 23, Bath for cura-[tive purposes, &c.
 — D., & Barker, J. A., 3493, Nov. 22, Points for tram-[ways.
 — E., 343, Feb. 2, Cartridge cases.
 — E., 400, Feb. 7, Military spade or shovel.
 — E. P., 2595, Aug. 31, Rotary-engines.
 — Harry, 232, Jan. 24, Moustache protector and [trainer.
 — Henry, & Green, W., 1082, Apr. 12, Lowering, &c. [ships' boats.
 — Hugh, 3380, Nov. 13, Life-belts.
 — J., 3530, Nov. 25, Steam-boilers.
 — J., & Walton, F., 1607, May 27, Nuts for screw bolts.
 — P., 3287, Nov. 6, Communicating in trains.
 — R., 2121, July 13, Sporting guns.
 — R. K., 2728, Sep. 13, Discharging cargo.
 — Jordan, J., & Paul, A., 3784, Dec. 13, Safety-valves.
 — Jordinson, R., & Mitchell, W. H., 3891, Dec. 23, Card-[ing engines.
 — Joseph, J. S., 927, Mar. 27, Paint, &c.
 — T., 2401, Aug. 12, Cooling & ventilating mines, [houses, &c.
 — Jourdeuil, P. E., & Parisot, F. (*Gedge*), 2322, Aug. 3, [Cordage & woven fabrics.
 — Jouvin, Doyon, & Co. (*Brewer*), 2804, Sep. 23, Gloves.
 — Jowett, G., 336, Feb. 2, Beating eggs.
 — Joy, D., 199, Jan. 22, Removing slag from blast furnaces.
 — D., 2426, Aug. 14, Purifying iron, removing slag, [&c., from furnaces.
 — Joyce, J. W., 3170, Oct. 25, Counteracting motion in [vessels.
 — Judkins, C., 2577, Aug. 30, Gas regulators.
 — Judson, A., & Force, W. M. (*Cheesbrough*), 1600, [May 27, Oil from seeds.
 — Judson, J. (*Cogswell*), 2439, Aug. 15, Governor valves.
 — Jupp, H. J., 417, Feb. 9, Breaking rock, bones, &c.
 — Jurgens, A. (*Beveridge*), 943, Mar. 30, Treating animal fats.
 — Jürgensen, C. P., & Hansen, R. M. (*Holten*), 823, Mar. 19, [Writing instruments.

K.

- Kastenbein, C., 2864, Sep. 28, Composing, &c., type.
 — Kastner, G. F. E., & Lavignac, A. (*Smith*), 1648, May 31, [Producing musical tones.
 — Kaulbach, E., 784, Mar. 14, Obtaining parallel & conver-[ting curvilinear into rectilinear motion.
 — E., 3584, Nov. 28, Preventing motion in vessels.
 — Kay, Abraham, 1994, July 2, Ice breaker & paddle for [boats, &c.
 — Ashton, 3602, Nov. 30, Hydraulic steam-pumps.
 — J. C., & Hartley, W., 2999, Oct. 11, Steam-engines.
 — J. Z., 3420, Nov. 16, Pipe-joints.
 — S. & T., 1173, Apr. 19, Feeding bottles, &c.
 — T., 2863, Sep. 28, Consuming smoke in furnaces.
 — T. & S., 1173, Apr. 19, Feeding bottles, &c.
 — Kayser, C. W., 3048, Oct. 16, Wire drawing.
 — Kayser, F. (*Printz*), 466, Feb. 14, Stamping needles.
 — Keats, J., 3123, Oct. 22, Screw-drivers.
 — Keeling, E. B., 150, Jan. 18, Signal-lamps.
 — E. B., 541, Feb. 20, Preserved meat dish.
 — Keene, J. (*Pétry*), 1534, May 20, Teaching numeration.

- Keep, O. H.* (Lake), 2098, July 11, Shirts.
Kehrmann, H., & De Laskarzewski, C. A., 1313, May 1, [Pianos.
 — *H., & De Laskarzewski, C. A.*, 3234, Nov. 1, [Musical instrument.
Keighley, G., 2776, Sep. 19, Looms.
Keir, J., Craven, J., Cockill, J., & Shaw, T., 165, Jan. 18, [Scouring & setting hides, &c.
Keirby, E., 1636, May 30, Recording low water in steam-boilers.
 — *J. E.*, 3558, Nov. 26, Elastic packing for pistons, [&c.
Keith, J. (Morgan-Brown), 2735, Sep. 14, Attaching [buttons.
Kelly, M., Morris, T., & Fletcher, T. & C., 1848, June 19, [Spring-mattresses, &c.
Kember, G., & Frei, J. G., 686, Mar. 6, Pumps.
Kendall, J. L. (Lake), 2740, Sep. 14, Stuffing for mattresses, &c.
Kendall, R., 3349, Nov. 11, Dish or stand for meats, &c.
 — *W. J., & Moorhouse, S.*, 740, Mar. 11, Communicating in trains.
 — *W. J., & Moorhouse, S.*, 910, Mar. 26, Umbrellas [and parasols.
Kendrick, T., 3636, Dec. 3, Crochet needles.
Keenard, T. W., 3341, Nov. 11, Indicating height of [water in steam-boilers.
Kennedy, J. C., 3867, Dec. 20, Rescuing from ice accidents.
 — *T. S., Naylor, J. W., & Fairbairn, Sir A.*, 2533, [Aug. 26, Preparing fibres.
Kennelly, T., 3866, Dec. 20, Blow pipes.
Kenny, J., 2637, Sep. 4, Button holes for boots.
Kent, G., 90, Jan. 11, Consuming smoke.
Kenward, E., 632, Feb. 29, Ploughs.
 — *W., & Crawshaw, A. T.*, 3648, Dec. 3, Bird [and animal trap.
Kenny, E., & Smith, A., 1331, May 2, Velvets, velveteens, &c.
 — *Hartley & Henry, & Swindells, L.*, 1540, May 21, [Chlorine and sulphuric acid.
 — *Henry & Hartley, & Swindells, L.*, 1540, May 21, [Chlorine and sulphuric acid.
 — *J.*, 2972, Oct. 9, Fire-grates.
 — *J.*, 3088, Oct. 19, Collecting and separating [ashes, &c.; cinder guard and shovel.
 — *J. & J. H.*, 3656, Dec. 4, Carding fibres.
 — *J. H. & J.*, 3656, Dec. 4, Carding fibres.
 — *R. W.*, 1767, June 12, Loom healds.
Kenyon, W. (Rabone), 1989, July 2, Spirit levels.
Kercado, G. T. de (Gedge), 3766, Dec. 12, Gas motive [power engine.
Kern, J. J., 1450, May 13, Combined cot and carriage.
Kernaul, M. H., 3768, Dec. 12, Sewing-machines.
Kerr, J., & McArthur, P. (Clachar), 792, Mar. 15, [Bale-presses.
 — *W. H., Brydges, C. J., Duncan, A. R., & Macnaughton, J.*, 1137, Apr. 17, Fire-arms.
Kerridge, B. J., 2888, Oct. 1, Lowering ships' boats.
Kershaw, J., & Worrall, J., 1069, Apr. 11, Scouring [fabrics.
 — *J., & Worrall, J.*, 1070, Apr. 11, Finishing cotton cords.
Kersting, F. (Lake), 3737, Dec. 9, Clarifying varnishes, [&c.
Kessler, J. L., & Faure, M. J. F. R. (Dufrené), 2205, [July 24, Concentrating and evaporating [sulphuric acid, &c.
Kesterton, H., 3870, Dec. 20, Steam-boilers.
Key, W., 3744, Dec. 10, Gas-retort settings.
Keys, C. G., Osgood, H., & Storer, M. F. (Newton), 576, Feb. 22, Hoists & safety hatches apparatus.
Keyworth, H. G., 1097, Apr. 12, Cases for letters, &c.
Kibbe, H. C. (Lake), 3689, Dec. 6, Railway couplings.
Kienast, J. H. F., 2721, Sep. 13, Heating railway carriages.
Kiesling, A. L., 3302, Nov. 7, Warming carriages; fuel.
Kiesling, L., Bergehausen, B., & Philipps, J. (Eagles), 1263, Apr. 27, Heating rooms, carriages, &c.
Kilby, C. E., & others (Edwards), 777, Mar. 14, Dial [plates for clocks, &c.
Kiloh, J., 415, Feb. 9, Grouts.
Kincaid, J., 789, Mar. 15, Tramways.
King, C. G. Y., 3544, Nov. 26, Pressure and vacuum gauges.
 — *C. W.*, 885, Mar. 23, Regulating speed of engines.
 — *G.*, 3275, Nov. 5, Gas.
 — *H. J. H.*, 1148, Apr. 17, Feeding carding machines, &c.
 — *H. J. H.*, 1990, July 2, Motive-power; pumping and [measuring fluids.
 — *J., J. M., & T. D. M.*, 3760, Dec. 11, Dry-closets [and commodes.
 — *J. M., T. D. M., & J.*, 3760, Dec. 11, Dry-closets [and commodes.
 — *P.*, 1764, June 11, Ships &c. for raising sunken [vessels.
 — *R.*, 603, Feb. 26, Portable closet or privy.
 — *R.*, 2814, Sep. 24, Gas regulators.
 — *T. D. M., J. & J. M.*, 3760, Dec. 11, Dry closets [and commodes.
 — *W. H.*, 1515, May 18, Bill cases, pocket books, &c.
Kingsland, L. S., & Wills, J. A. (Clark), 609, Feb. 26, [Horse-shoe nails.
Kinsey, J., 3822, Dec. 17, Liquid meters.
Kirby, J., 1887, June 22, Winding linen yarns, &c.
Kirk, A. C., 1952, June 28, Steering and motive-power [apparatus.
 — *A. C.*, 3911, Dec. 24, Steering and motive-power [apparatus.
 — *P.*, 3459, Nov. 20, Metal rolling mills.
Kite, J., 1214, Apr. 23, Basting food in cooking.
Kitt, A., & Young, H., 981, Apr. 3, Purifying Gas.
Kleberg, C. G. (Tsherikovsky), 1229, Apr. 24, Sugar.
Klopsch, A., Grumel, V., Palliser, J., & McDowell, R. [(Weatherdon), 3231, Oct. 31, Bleaching fabrics, &c.
Klotz, E. & V., Klotz, Made., & Meyer, H. (Clark), 47, Jan. 5, Neckties.
 — *Made., Klotz, E. & V., & Meyer, H.* (Clark), 47, Jan. 5, Neckties.
 — *V. & E., Klotz, Made., & Meyer, H.* (Clark), 47, Jan. 5, Neckties.
Knapp, H. F. (Browne), 3686, Dec. 5, Raising vessels.
Kniaghininsky, P., Sewastganoff, N., & Dornovo, D. [(Doubelt), 1189, Apr. 20, Transmitting and [registering telegraphic despatches.
 — *P., Sewastganoff, N., & Dornovo, D.* [(Doubelt), 1822, June 17, Transmitting telegraphic despatches.
 — *P., Sewastganoff, N., & Dornovo, D.* [(Doubelt), 2945, Oct. 5, Transmitting and [registering telegraphic despatches.
Knight, S. P. (Newton), 1012, Apr. 5, Electrotypes [moulds.
Knott, J. (Speakman), 2171, July 20, Furnaces.
 — *J.* (Speakman), 2172, July 20, Lubricator.
 — *J.*, 3622, Dec. 2, Utilizing waste heat.
 — *R.*, 3154, Oct. 24, Protecting walls, &c. from [moisture.
Knowles, C. B., & Saunders, J. E. (Lake), 2571, Aug. 29, Blast pipe for locomotive engines.
Knowles, E., 3235, Nov. 1, Looms.
 — *James*, 294, Jan. 31, Rooting up weeds.
 — *James, & Mayell, J. C.*, 1579, May 23, Cook-[ing apparatus.

Knowles, John, Shaw, H., & Ditchfield, W., 122, Jan. 15, [Weaving.
Knowles, R. W. (Clark), 838, Mar. 19, Compound for [cleaning carpets, &c.
 Kochs, W. E., 107, Jan. 13, Transferring trains to and [from ferries.
 — W. E., 1389, May 2, Steam-boilers.
 — W. E., 1865, June 21, Piers, landing stages, &c.; [transferring trains from ferry boats.
 Koettgen, A. (*Kunstädter*), 3794, Dec. 14, Ovens.
 Kölgen, F., & Folkmann, A. (Hughes), 639, Feb. 29, [Destroying snow and ice.
 Königs, E., 571, Feb. 22, Sulphate of soda or potash, [hydrochloric acid and chlorine.
 Konn, S. W. (*Ladigune*), 3809, Dec. 16, Electric-light.
 Körting, E., 1796, June 14, Condensers.
 Krieger, A., 2173, July 20, Tramway carriages.
 — A., & Cauderlier, A., 3887, Dec. 21, Bottle-stoppers.
 Krochmann, E. (Hughes), 2895, Oct. 1, Jointing, &c. [railway rails.
 Kromer, T., 2940, Oct. 5, Locks and latches.
 Kühn, R., 1840, June 18, Paving roads, dressing stone.
Kunstädter, J. J. (Koettgen), 3794, Dec. 14, Ovens.
 Kyle, D. D., 1095, Apr. 12, Traps for waterclosets, &c.

L.

Labarre, E. de (Hughes), 191, Jan. 20, Preparing wool [for spinning.
 Lackersteen, J. F., & Christopher, J. S., 1143, Apr. 17, [Propelling vessels.
 — J. F., & Holcroft, G., 1155, Apr. 18, Sepa- [rating metals from ores, &c.
 — J. F., & Christopher, J. S., 1931, June 26, [Hydrogen gas.
 — J. F., 3829, Dec. 17, Hydrogen gas.
Lacruz, A. (Palmer), 2183, July 22, Catamenial belt.
 Lacy, H., 3224, Oct. 31, Lubricators.
 Ladbury, R. B., 3841, Dec. 18, Packing pins.
 Ladelle, W. W., 1195, Apr. 22, Automatic pulp save-all.
Ladigune, A. N. (Konn), 3809, Dec. 16, Electric-light.
 Lafargue, A., 2668, Sep. 9, Gauges.
 Lafone, H., & Cook, J., 2069, July 9, Blow pipes; gene- [rating heat.
 Lafrogne, J. F., 994, Apr. 4, Gas-making.
 Lagrange, A. F., 2094, July 11, Typographic presses, &c.
 — J. V. P., 1437, May 11, Saccharine juices & syrups.
 Laidlaw, W., & Fairgrieve, T., 1491, May 16, Carding.
 Lake, J., 2168, July 19, Steam-boilers.
 — W. R. (*Day*), 10, Jan. 1, Looms.
 — W. R. (*Thomson*), 32, Jan. 4, Anchors.
 — W. R. (*Mercer*), 120, Jan. 15, Threading needles.
 — W. R. (*Radde*), 121, Jan. 15, Pipes and pipe joints.
 — W. R. (*Robbins*), 133, Jan. 16, Horse-collars.
 — W. R. (*Croasdale*), 148, Jan. 17, Bag for guano, &c.
 — W. R. (*Benton*), 157, Jan. 18, Bronzing machines.
 — W. R. (*Morris*), 162, Jan. 18, Waterproofing [leather, &c.
 — W. R. (*Allen*), 163, Jan. 18, Relief valves.
 — W. R. (*Campbell*), 169, Jan. 18, Printing presses.
 — W. R. (*Müller & Eichelbrenner*), 200, Jan. 22, [Furnaces and heating.
 — W. R. (*Silver*), 218, Jan. 23, Hoists or elevators.
 — W. R. (*Brierly & Brierly*), 219, Jan. 23, Changing [shuttle boxes.
 — W. R. (*Clark*), 251, Jan. 25, Lubricating.
 — W. R. (*Blake*), 264, Jan. 26, Boots and shoes.
 — W. R. (*Schott*), 279, Jan. 30, Gypsum cement.
 — W. R. (*Terrell, Allen & Enoch*), 315, Feb. 1, Ope- [rating loom shuttles.

Lake, W. R. (*Myers*), 316, Feb. 1, Detecting leaks in pipes.
 — W. R. (*Myers*), 321, Feb. 1, Lamp & other burners.
 — W. R. (*Clarke*), 329, Feb. 1, Preparing, &c. hops.
 — W. R. (*Hotchkiss*), 345, Feb. 2, Wood-pavement.
 — W. R. (*Hotchkiss*), 346, Feb. 2, Wood-pavement, &c.
 — W. R. (*Morison*), 373, Feb. 5, Sheet iron.
 — W. R. (*Foster*), 387, Feb. 6, Explosive-power [engines.
 — W. R. (*Hitchcock*), 405, Feb. 7, Combining earthy [with vegetable substances for parchment, &c.
 — W. R. (*Sprague*), 421, Feb. 9, Mowing & reaping.
 — W. R. (*Brayton*), 432, Feb. 10, Gas-engines.
 — W. R. (*McLeod*), 443, Feb. 12, Bridges, &c.
 — W. R. (*Shepard & Seaman*), 444, Feb. 12, Cans and [locking same.
 — W. R. (*Miller*), 481, Feb. 15, Harvesting machines.
 — W. R. (*Mills & Taylor*), 500, Feb. 16, Boots & shoes.
 — W. R. (*Martin*), 501, Feb. 16, Weaving shuttles.
 — W. R. (*Myers*), 503, Feb. 16, Operating washing [machines, &c.
 — W. R. (*Earnest*), 521, Feb. 17, Fire-arms.
 — W. R. (*Seibert*), 525, Feb. 17, Packing cases for [alkalies, &c.
 — W. R. (*Diehl*), 527, Feb. 19, Steam-boiler furnaces.
 — W. R. (*Warth & Jobbins*), 536, Feb. 19, Cutting [fabrics, &c.
 — W. R. (*Passmore*), 538, Feb. 19, Lawn-mowers.
 — W. R. (*Gear*), 579, Feb. 22, Cutting, &c. marble [and stone.
 — W. R. (*Yost*), 679, Mar. 5, Railway rails.
 — W. R. (*Morrell*), 680, Mar. 5, Refined sugar, &c.
 — W. R. (*Paige & Reynolds*), 706, Mar. 7, Type- [setting.
 — W. R. (*Hail*), 717, Mar. 8, Cleaning cotton.
 — W. R. (*Duff*), 722, Mar. 8, Steam-engine governors.
 — W. R. (*Mot & Weaver*), 734, Mar. 9, Propelling [vessels and machinery.
 — W. R. (*Coté & Seymour*), 760, Mar. 12, Boots and [shoes.
 — W. R. (*Fitzhenry*), 764, Mar. 13, Working hides [or leather.
 — W. R. (*Emery, Doyen & Sparrow*), 770, Mar. 14, [Preventing injury to railway carriages.
 — W. R. (*Caswell*), 773, Mar. 14, Rolls for spinning.
 — W. R. (*Batchelder*), 783, Mar. 14, Gas-lighting.
 — W. R. (*Richardson & Hucker*), 786, Mar. 14, Boot [and shoe heels.
 — W. R. (*Field & Andrews*), 828, Mar. 19, Telegraphs.
 — W. R. (*Field & Andrews*), 829, Mar. 19, Telegraphs.
 — W. R. (*Mallory*), 830, Mar. 19, Raising, &c. boats.
 — W. R. (*Andrews, Clague & Randall*), 855, Mar. 21, [Attaching covers to pamphlets.
 — W. R. (*Bradford*), 856, Mar. 21, Securing lacing- [hooks in leather, &c.
 — W. R. (*Bailey, Goodrich & Locke*), 857, Mar. 21, [Bakers' ovens.
 — W. R. (*Wood*), 864, Mar. 21, Sewing-machines.
 — W. R. (*Lovett*), 895, Mar. 23, Cartridges.
 — W. R. (*Thomas*), 896, Mar. 23, Mounting and [working ordnance.
 — W. R. (*Thomas, Menere & Thomas*), 897, Mar. 23, [Mounting and working ordnance.
 — W. R. (*Ellsworth*), 900, Mar. 25, Fire extinguishers.
 — W. R. (*Lamm*), 908, Mar. 25, Driving vehicles by [steam.
 — W. R. (*Croll, Barrett & Plush*), 909, Mar. 25, [Bearings for journals.
 — W. R. (*Cornell*), 960, Apr. 1, Fire-proof roofing.
 — W. R. (*Chase & Platt*), 961, Apr. 1, Preparing [fibres for spinning.
 — W. R. (*Guichard & Dupont*), 962, Apr. 1, Pro- [ducing patterns on fabrics.

Lake, W. R. (*Taylor & Brightman*), 968, Apr. 2, Paper
[rag-engines.
— W. R. (*Raynor*), 977, Apr. 3, Gas-burners.
— W. R. (*Stern*), 979, Apr. 3, Compounds for cleans-
[ing carpets, &c.
— W. R. (*Carter*), 992, Apr. 4, Cutting trenches.
— W. R. (*Chisholm*), 1002, Apr. 5, Utilising railway
[rails.
— W. R. (*Biggs*), 1019, Apr. 5, Theodolites.
— W. R. (*Swift*), 1044, Apr. 8, Paper-pulp.
— W. R. (*Carter*), 1049, Apr. 9, Ditching or trenching.
— W. R. (*Mann*), 1064, Apr. 11, Sieves.
— W. R. (*Date & Date*), 1088, Apr. 12, Converting
[iron into steel.
— W. R. (*Muir*), 1112, Apr. 13, Sewing-machines.
— W. R. (*Caumon alias Absterdam*), 1135, Apr. 17,
[Iron bars, plates, &c.
— W. R. (*Richardson, Hacker & Blake*), 1175,
[Apr. 19, Filling metallic boot heel shells.
— W. R. (*Grell*), 1176, Apr. 19, Stearine and troleum.
— W. R. (*Myers*), 1202, Apr. 22, Burner for lamps, &c.
— W. R. (*Baxter*), 1244, Apr. 25, Steam-engines.
— W. R. (*Lewis & Pratt*), 1257, Apr. 26, Extracting
[phosphoric acid, &c.
— W. R. (*Conger*), 1304, May 1, Roofing.
— W. R. (*John*), 1332, May 2, Metallic springs.
— W. R. (*Ramsdell & Crane*), 1361, May 4, Knitting.
— W. R. (*Batchelder*), 1378, May 6, Electric torches.
— W. R. (*West*), 1408, May 8, Compressing metallic
[articles.
— W. R. (*Sutherland*), 1418, May 9, Spinning.
— W. R. (*Alexander*), 1425, May 10, Clamp for
[ropes, &c.
— W. R. (*Myers*), 1452, May 13, Pneumatic signal
[apparatus.
— W. R. (*Densmore*), 1458, May 14, Painting.
— W. R. (*Steinway*), 1459, May 14, Piano-fortes.
— W. R. (*Curtis*), 1499, May 16, Combined seat & desk.
— W. R. (*Daniels*), 1500, May 16, Drain pipes.
— W. R. (*Rueff*), 1553, May 22, Rolling bearings.
— W. R. (*Rogers & Burchfield*), 1574, May 23, Sheet-
[iron.
— W. R. (*Taylor & Holland*), 1575, May, 23, Stoning
[raisins, &c.
— W. R. (*Horack*), 1576, May 23, Railway couplings.
— W. R. (*Bruen*), 1584, May 23, Propelling vessels.
— W. R. (*Luckenbach*), 1585, May 23, Paving blocks.
— W. R. (*Cavayé*), 1586, May 24, Extracting oil
[from, and grinding maize.
— W. R. (*Woodbury*), 1618, May 29, Railway rails.
— W. R. (*Woodbury*), 1619, May 29, Railway wheels.
— W. R. (*Tripler*), 1646, May 30, Railway sleepers.
— W. R. (*Hamilton*), 1655, May 31, Brick kilns.
— W. R. (*Campbell & Saunders*), 1656, May 31,
[Packing for joints.
— W. R. (*Brindle*), 1666, June 1, Spark arresters.
— W. R. (*Chéradame, Zarzecki & Oursel*), 1667,
[June 1, Boot and shoe heels.
— W. R. (*Loche & Loche*), 1676, June 3, Steam
[pressure regulators.
— W. R. (*Proctor & Osgood*), 1677, June 3, Sewing-
[machines, &c.
— W. R. (*Smith*), 1734, June 8, Stair rods & fastenings.
— W. R. (*Harris*), 1783, June 13, Rotary pumps and
[engines, &c.
— W. R. (*Johnston*), 1827, June 17, Harvesters.
— W. R. (*Johnston*), 1828, June 17, Harvesters.
— W. R. (*Hiler*), 1847, June 19, Copper-coated or
[cored wire.
— W. R. (*Jebb*), 1889, June 22, Check-tickets.
— W. R. (*Johnston*), 1937, June 26, Sewing-machine
[attachments.

Lake, W. R. (*Glassie, Nash & Armes*), 1957, June 28,
[Fastenings for bedsteads, &c.
— W. R. (*Meneely*), 2050, July 6, Welding brass upon
[iron or steel; axle-bearings, &c.
— W. R. (*Chéradame, Le Dreux & Oursel*), 2053,
[July 6, Ventilating.
— W. R. (*Smith*), 2065, July 9, Compound for paving,
[&c.
— W. R. (*Walton*), 2067, July 9, Extinguishing fires.
— W. R. (*Keep*), 2098, July 11, Shirts.
— W. R. (*Aiken & Swett*), 2099, July 11, Bale ties, &c.
— W. R. (*Westcott Type-setting Company*), 2111,
[July 12, Making and composing type.
— W. R. (*Schott*), 2119, July 13, Gypsum cement.
— W. R. (*Bell*), 2130, July 15, Screw bolt.
— W. R. (*Bell*), 2131, July 15, Bolts, rivets & spikes.
— W. R. (*Silver*), 2185, July 22, Hoists.
— W. R. (*Harris*), 2188, July 22, Raising liquids,
[grain, &c.; rotary engines.
— W. R. (*Wardwell*), 2200, July 23, Sewing-machines.
— W. R. (*Martin & Beath*), 2210, July 24, Making
[ice; cooling rooms, &c.
— W. R. (*Hall*), 2223, July 25, Adjusting window
[blinds or shades.
— W. R. (*Harper*), 2237, July 26, Sewing-machine
[and button-hole attachment.
— W. R. (*De Voy*), 2342, Aug. 6, Ink-erasing com-
[pound.
— W. R. (*Weed*), 2369, Aug. 9, Nutritious compounds.
— W. R. (*Brooks*), 2425, Aug. 14, Distilling and
[steaming apparatus.
— W. R. (*Harding*), 2443, Aug. 15, Puddling furnaces.
— W. R. (*Mueller*), 2460, Aug. 19, Igniting gas.
— W. R. (*Pope*), 2461, Aug. 19, Electro-magnetic
[signalling.
— W. R. (*Sperry*), 2563, Aug. 28, Type-setting ma-
[chines.
— W. R. (*Knowles & Saunders*), 2571, Aug. 29, Blast
[pipe for locomotive engines.
— W. R. (*Bloodgood*), 2572, Aug. 29, Coating ships'
[bottoms.
— W. R. (*Tirrell, Flether & Cutler*), 2587, Aug. 30,
[Lighting burners, &c.
— W. R. (*Weston & McDonald*), 2684, Sep. 10,
[Burnishing photographs, &c.
— W. R. (*McDonald*), 2695, Sep. 11, Cotton mate-
[rials, &c.
— W. R. (*Severance*), 2719, Sep. 13, Tempering and
[refining steel.
— W. R. (*Laughland*), 2734, Sep. 13, Wire bale-tie.
— W. R. (*Kendall*), 2740, Sep. 14, Stuffing for mat-
[tresses, &c.
— W. R. (*Briggs*), 2741, Sep. 14, Chimneys & fire-
[places.
— W. R. (*Wood*), 2781, Sep. 19, Sewing-machines.
— W. R. (*Grosfeld, Bennett & Carman*), 2818,
[Sep. 24, Sewing-machine attachment.
— W. R. (*Lincoln & Rayer*), 2831, Sep. 25, Sewing-
[machines.
— W. R. (*Bruen*), 2836, Sep. 25, Reaping-machine rake.
— W. R. (*Blackman*), 2906, Oct. 2, Wheels.
— W. R. (*Rice*), 2933, Oct. 4, Spindles for spinning
[machines.
— W. R. (*Weston*), 3004, Oct. 11, Steam generators.
— W. R. (*Vose*), 3043, Oct. 15, Chairs.
— W. R. (*Benardaki*), 3086, Oct. 18, Areometrical
[balance.
— W. R. (*Hyatt & Hyatt*), 3101, Oct. 21, Pyroxyline
[or gun-cotton.
— W. R. (*Freeman*), 3119, Oct. 22, Top rolls for spinning.
— W. R. (*Lefauve & Villain*), 3204, Oct. 29, Fire-arms.
— W. R. (*Schmitt*), 3228, Oct. 31, Heated air motors.

- Lake, W. R. (*Critchlow*), 3229, Oct. 31, Piston valve.
 — W. R. (*Mitchell*), 3239, Nov. 1, Bending metal tubes.
 — W. R. (*Batchelder*), 3299, Nov. 7, Electric torches.
 — W. R. (*Mekarshi*), 3338, Nov. 9, Air-motor.
 — W. R. (*Woodbury*), 3365, Nov. 12, Kaleidoscope.
 — W. R. (*Nicholson*), 3392, Nov. 14, Reaping and mowing.
 — W. R. (*Rondel*), 3438, Nov. 18, Inkstand.
 — W. R. (*Roberts*), 3678, Dec. 5, Iron & steel; furnaces.
 — W. R. (*Kibbe*), 3689, Dec. 6, Railway couplings.
 — W. R. (*Alden*), 3691, Dec. 6, Horse-shoe nails.
 — W. R. (*Faull*), 3722, Dec. 7, Lubricating shafting, &c.
 — W. R. (*Simmons*), 3736, Dec. 9, Insulating compound.
 — W. R. (*Kersting*), 3737, Dec. 9, Clarifying vases, &c.
 — W. R. (*Woodbury*), 3778, Dec. 13, Railway wheels.
 Lalouette, V. (*Henderson*), 2253, July 29, Save-all for candlesticks, &c.
 Lamacraft, J., 3514, Nov. 23, Preparing paper for post, &c.
 Lamarre, E. A. A. (*Johnson*), 827, Mar. 19, Fire works and signals.
 Lamb, A. C. L., Scrivener, W. C., & Bidder, J., 2149, July 17, Clasp for necklaces and wearing apparel.
 — G. W., 377, Feb. 5, Boots and shoes.
 Lambert, R. C. (*Morgan-Brown*), 1859, June 20, Boots and shoes.
 Lambert, T., & White, E. J., 1836, June 18, Water cocks.
 Lamm, E. (*Lake*), 903, Mar. 25, Driving vehicles by steam.
 La Monte, G., Saxe, G. G., & Clayton, C. H. (*Haseltine*), 2670, Sep. 9, Colored and figured paper.
 Lamy, F., 1091, Apr. 12, Puce garnet colours.
 Lancaster, C. W., 718, Mar. 8, Shot, shell, and other missiles.
 — H., 2074, July 10, Locks or fastenings.
 — J., 3789, Dec. 14, Hand sowing machine.
 — W., & Bullough, J., 683, Mar. 6, Sizing and dressing yarns.
 Lander, H., 2850, Sep. 27, Hay rake and elevator.
 Landfear, W. R., & Whittemore, D., 2311, Aug. 2, Pegging boots and shoes.
 Lane, J., 2366, Aug. 8, Brewing.
 — T., & Porter, R., 588, Feb. 23, Gas; furnaces.
 Lange, F. H., & Sinclair, J. (*Mills*), 1130, Apr. 16, Sheet iron.
 Langen, E. (*Hughes*), 2456, Aug. 17, Loaf sugar.
 Langham, J. G., & Owen, C. M., 3121, Oct. 22, Railways and rolling stock.
 Lanteigne, U. A., 848, Mar. 20, Ornamenting, &c. wood.
 Laporte, E., & Fontaine, C. D., 800, Mar. 16, Tobacco.
 Lara, G. de, 2330, Aug. 5, Printing on blotting paper, &c.
 — G. de, & De Salomos, Viscount M., 2107, July 12, Interleaving diaries, &c.
 Large, J., 3079, Oct. 18, Railway carriages.
 Larkin, H., Leighton, A., & White, W., 1062, Apr. 10, Iron and steel.
 — H., Leighton, A., & White, W., 2964, Oct. 8, Iron and steel.
 — H. W., & Taylor, F. F., 533, Feb. 19, Safety car coupling.
 Larmanjat, J. (*Clark*), 1218, Apr. 23, Hardening tiles, &c.
 — J. (*Clark*), 1246, Apr. 26, Locomotive engines and carriages; permanent way.
 Larmuth, M. H., & Norton, F., 1412, May 9, Standards for telegraph wires.
 Lasché, J. M., 2893, Oct. 1, Impermeable fabrics for hangings, &c.
 Laskarzewski, C. A. de, & Kehrman, H., 1313, May 1, Pianos.
 Laskarzewski, C. A. de, & Kehrman, H. 3234, Nov. 1, Musical instruments.
 Last, S., 285, Jan. 30, Sawing and planing wood.
 Latouche, J. A. C. de, 3468, Nov. 20, Ordnance; fire-arms, &c.
 Lattimer, W., 3927, Dec. 27, Extinguishing fires.
 Lauder, G., Duncan, G., & Wilson, W. A., 3834, Dec. 18, Stereotypes.
 Laughland, G. L. (*Lake*), 2734, Sep. 13, Wire bale-tie.
 Lauranson, P. (*Tbiray-Mawrin*), 2479, Aug. 21, Book and paper binders.
 Laurence, G. 3391, Nov. 14, Knickerbockers.
 Laurent, A., & Herrmann, L., 1041, Apr. 8, Lamp-shades.
 Laurent, J. B. Radelet, & Son (*Gedge*), 1480, May 15, Vertical hammers.
 Laurie, A., 558, Feb. 21, Skylights.
 Lavater, M. L. J. (*Clark*), 3414, Nov. 15, Moulding India rubber, &c.
 Lavignac, A., & Kastner, G. F. E. (*Smith*), 1648, May 31, Producing musical tones.
 Law, C. (*Bain*), 1241, Apr. 25, Screw-drivers.
 Law, J. & S., 3283, Nov. 5, Cards for carding.
 — S. & J., 3283, Nov. 5, Cards for carding.
 Lawrence, G., Lingard, J. W., & Richards, J., 1333, May 2, Bouquet holders.
 — H. A. & L. A., 1033, Apr. 8, Hats, bonnets, and shapes.
 Lawrence, J. (*Johnson*), 339, Feb. 2, Nail machines.
 Lawrence, L. A. & H. A., 1033, Apr. 8, Hats, bonnets, and shapes.
 Lawrie, T., & Da Costa, L. A., 1593, May 25, Traps, waste plugs, or gullies.
 Lawson, E., & Hodgetts, R. G., 2679, Sep. 10, Metallic bedsteads, &c.
 — F. W., & Fitton, E. G., 568, Feb. 22, Preventing accidents with driving belts.
 — F. W. (*Girardoni*), 625, Feb. 28, Batching jute.
 — J., & Hainsworth, B., 919, Mar. 26, Ventilators.
 Laycock, T., 2288, July 31, Sewing-machines.
 — T., & Shuttleworth, J., 3303, Nov. 7, Shuttle spools.
 — W. E. (*Carpenter*), 3226, Oct. 31, Cutting screws.
 — W. S., 2591, Aug. 31, Spinning and twisting horse hair, &c.
 Leachman, J., & Bullough, J., 3774, Dec. 12, Preparing and spinning fibres.
 — W. B., & Nussey, G. H., 2370, Aug. 9, Pressing fabrics.
 Leaker, A. A. & W. H., & Norman, W., 2238, July 26, Coffins.
 — W. H. & A. A., & Norman, W., 2238, July 26, Coffins.
 Leavitt, C. P. (*Newton*), 2784, Sep. 19, Air-engines.
 Lebacqz, F., 846, Mar. 20, Horse-shoes.
 — F., 2798, Sep. 21, Horse-shoes.
 Le Blanc, J. A., & Vincent, A. J. (*Brewer*), 2925, Oct. 3, Stamping rivets, bolts, &c.
 Lebauf, J. L. (*Johnson*), 650, Mar. 1, Damping paper, &c.
 Leburn, W. G., 18, Jan. 3, Shuttles for weaving.
 Lecamp, L., & Crévissier, L., 1775, June 12, Cambering leather, &c.
 Le Clercq, A. (*Bonneville*), 238, Jan. 24, Copying presses.
 Lecaur, E. J. J., & Pinel, M. P. A. (*Henry*), 2500, Aug. 22, Preparing fibres.
 Leconte, E. (*Johnson*), 404, Feb. 7, Alcoholic liquors, &c.
 — E. (*Johnson*), 3956, Dec. 30, Starch, paper pulp, &c. from maize.
 Le Dreux, A. E., Oursel, V. C. J., & Chéradame, A. L. (*Lake*), 2053, July 6, Ventilating.
 Lee, A., 128, Jan. 16, Heating buildings.

Lee, J. A., 1804, June 15, Fibre for paper making.
 — J. C., 694, Mar. 7, Recovering oils, &c. from waste [waters].
 — J. D., & White, J., 3311, Nov. 8, Ships and vessels.
 — R. J., 3277, Nov. 5, Inhaling; heating medical baths.
 Lees, R. J., & Garforth, J. H., 2840, Sep. 26, Fuel-economisers.
 — R. J., & Garforth, J. H., 3324, Nov. 9, Fuel-economisers; heating feed-water.
 — S., 2248, July 27, Raising safety-valves.
 — W., 3966, Dec. 31, Securing sliding windows, [shutters, &c.].
 Lefauvre, E., & Villain, J. (Lake), 3204, Oct. 29, Fire-arms.
 Legat, D. M. (Clark), 1098, Apr. 12, Blocking hats; [regulating pressure of fluids].
 Legge, J., 3039, Oct. 15, Furnaces.
 Legris, L. (Ducomet), 1272, Apr. 27, Packing cases.
 Le Gros, E. (D'Silva), 2008, July 3, Drilling rock, &c.
 Leigh, E., 205, Jan. 23, Constructing and propelling ships.
 Leighton, A., White, W., & Larkin, H., 1062, Apr. 10, [Iron and steel].
 — A., White, W., & Larkin, H., 2964, Oct. 8, [Iron and steel].
 Lemaire, A., & Sonnois, J. (Johnson), 1791, June 14, [Separating volatile and condensable gases].
 Le Mesurier, W. H., 566, Feb. 22, Roofing buildings.
 Lemoine, L., & Pochet, L., 1232, Apr. 24, Removing [smoke, &c. from railway tunnels].
 Le Monnier, G., & Cochet, J., 1844, June 19, Advertizing.
 Leodrum, G., & Wilson, J., 638, Feb. 29, Finishing cloth.
 Lenny, C., 565, Feb. 21, Carriage heads.
 Lenox, E. S., 1280, Apr. 29, Concentrating light.
 Leslie, B., 2606, Sep. 2, Jointing rails.
 Lessware, J. N., & Purkis, R. A., 2574, Aug. 29, Safety [labels].
 Lester, H. E., 19, Jan. 3, Steering vessels.
 — H. E., 1736, June 8, Steering vessels.
 Letchford, R. M., 2392, Aug. 10, Matches.
 — R. M., & Nation, W. B., 890, Mar. 23, Paraffine.
 Letellier, H. A. (Bonneville), 2389, Aug. 10, Steel.
 Levy, C., 2289, July 31, Steam-engines.
 — C., (Levey), 2235, July 26, Printing presses.
 Levy, J. (Levey), 2235, July 26, Printing presses.
 Lewin, S., 1833, June 18, Ploughs.
 — S., 2849, Sep. 27, Thrashing and stacking machine.
 — S., 3690, Dec. 6, Ploughs.
 Lewis, C. W. (Bousfield), 3415, Nov. 15, Cutting and [polishing glass, &c.].
 — E. C., & others (Edwards), 777, Mar. 14, Dial [plates for clocks, &c.].
 Lewis, G., 60, Jan. 8, Ploughs.
 — G. B., & Ward, W. M., 1449, May 13, Fishing [and other nets].
 Lewis, G. T., & Pratt, N. A. (Lake), 1257, Apr. 26, [Extracting phosphoric acid, &c.].
 Lewis, James, 876, Mar. 22, Metallic bedsteads, &c.
 — John, 1247, Apr. 26, Studs for horse-shoes, and [boots and shoes].
 — John, 2664, Sep. 9, Feeding fuel; consuming smoke.
 — Joseph W., 2347, Aug. 7, Covering cords, gimps, [&c.].
 Lewis, O. C. (Clark), 1210, Apr. 23, Motive-power [engines and pumps].
 Lewis, B. F., 1831, June 18, Pen, pencil & crochet-needle [holders, needle cases, &c.].
 Lewis, W., & Way, D. T. (Benson), 1258, Apr. 27, [Stockings for horses].
 Lewty, J., & Smith, G., 3018, Oct. 14, Nose pegs for [spinning mules].
 Ley, W., & Pinker, J., 1401, May 8, Engine packing.
 — W., & Pinker, J., 2609, Sep. 2, Fastener for sacks, [bags, &c.].

Liddington, J., 1094, Apr. 12, Turnstile for public car-riages, buildings, &c.
 Liebieh, I., 1463, May 14, Pianofortes.
 Light, J., & Gerhard, F. W., 801, Mar. 16, Iron and steel.
 Lilly, A., 1101, Apr. 13, Lubricators.
 Lin, J. M. J. C. du, & Guillemare, A. F. (Johnson), 1410, [May 8, Manure].
 Lincoln, W. S., & Rayer, W. A. (Lake), 2831, Sep. 25, [Sewing-machines].
 Lindblad, J. A., 1519, May 18, Buffers for railways, &c.
 Lindenblith, I. (Clark), 2809, Sep. 23, Elevating apparatus.
 Lindley, L., 1819, June 17, Finishing lace fabrics, &c.
 Lindsay, E. J., 2821, Sep. 24, Toy row-boat.
 — G., 101, Jan. 12, Transmitting motion.
 — J., & Urquhart, W. W., 3836, Dec. 18, Woven [fabrics].
 Lindsley, I., & Bartlett, W. L. (Clark), 702, Mar. 7, [Covering carding rolls, &c.].
 Lingard, J. W., Richards, J., & Lawrence, G., 1333, [May 2, Bouquet holders].
 Linney, W., 2162, July 18, Propelling looms, &c.
 Linwood, T., 2203, July 24, Signal and other lamps.
 Liogier, M. (Johnson), 2944, Oct. 5, Shingling and [drawing hammers].
 Lipscombe, F., 2450, Aug. 16, Treating noxious vapours.
 Lister, S. C., 3139, Oct. 23, Combing machines.
 Little, G., 850, Mar. 20, Combing fibres.
 — G., 1207, Apr. 22, Electric telegraphs.
 — G., & Eastwood, T. C., 904, Mar. 25, Preparing [and combing fibres].
 Littlejohns, S., 713, Mar. 8, Harness.
 Livsey, P. J. (Hall), 3219, Oct. 31, Vices.
 Lloyd, C. M., 1482, May 15, Cutting out, &c. forms of wood.
 — E., 322, Feb. 1, Sashes and frames for flowers, &c.
 — E., 3638, Dec. 3, Iron construction for buildings, &c.
 — N., 224, Jan. 24, Fixing colors on fabrics, &c.
 — N., & Green, R. E., 1084, Apr. 12, Preparing yarns, &c.
 — S., 193, Jan. 20, Lighting fires, &c.
 Löhnitz, H. C., 2319, Aug. 3, Generating steam; heating, &c.
 Lochhead, W., 2518, Aug. 24, Asbestos or amianthus.
 Lock, J. H., 479, Feb. 15, Indicating names of stations.
 — J. H., 805, Mar. 16, Bed tables and book supports.
 Lock Co., American Seal (Mills), 252, Jan. 25, Seal-locks.
 Locke, A. C. & N. C. (Lake), 1676, June 3, Steam [pressure regulators].
 — J. A., Bailey, G. E., & Goodrich, C. B. (Lake), [857, Mar. 21, Bakers' ovens].
 — N. C. & A. C. (Lake), 1676, June 3, Steam [pressure regulators].
 Lockhart, J., 2659, Sep. 7, Heat regulator.
 Lockman, C., 3782, Dec. 13, Driving sewing-machines.
 Lockwood, W., 1555, May 22, Steam-boilers.
 Lockyer, J. N., 3846, Dec. 18, Estimating metals.
 — W. J., 774, Mar. 14, Artificial manures.
 Lodge, J., 1744, June 10, Compressing fuel, clay, &c.
 Lofts, E., 1448, May 13, Washing bottles.
 Loir, V. M. (Gedge), 2921, Oct. 3, Hydraulic engine.
 Loiseau, E. F. (Clark), 2813, Dec. 16, Artificial fuel.
 Lomax, H. & J., Bradbury, G. F., & Chadwick, T., 1370, [May 6, Sewing machines].
 — J. & H., Bradbury, G. F., & Chadwick, T., 1370, [May 6, Sewing machines].
 Lones, J. & J. C., Vernon, C., & Holden, E., 3884, [Dec. 21, Carriage axles].
 — J. C. & J., Vernon, C., & Holden, E., 3884, [Dec. 21, Carriage axles].
 Long, J., 1118, Apr. 15, Bottling liquids.
 — R., 1635, May 30, Cases for stamps, tickets, &c.
 Longden, C. F., 3640, Dec. 3, Fire places; economizing heat.
 Longley, R., 3952, Dec. 30, Preventing, &c. scale in boilers.
 Longman, S. P., & Alderman, E. C., 1402, May 8, Regis-tering issue of tickets.

Longridge, J. A., 3259, Nov. 2, Locomotive engines.
 Longsdon, A., 787, Mar. 14, War-ships, forts, batteries, &c.
 Looker, B., 1397, May 7, Ventilating bricks or slabs.
 — B., 3291, Nov. 6, Fire-grates or stoves.
 Lorberg, W., 2959, Oct. 8, Soap.
 Louche, J. H., 3752, Dec. 11, Turbines.
 Louineau, B. (Gedge), 2965, Oct. 8, Dominoes.
 Love, P., 2179, July 20, Excavating or draining.
 — P., 3780, Dec. 13, Excavating, &c. bog moss for fuel.
 Lovett, C. W. (Lake), 895, Mar. 23, Cartridges.
 Low, D.G., 530, Feb. 19, Sail hank.
 — J., 33, Jan. 4, Magnetic binnacles.
 — M., & Jaynor, A., 1467, May 14, Steam-boilers and [furnaces].
 Lowcock, A., & Stones, C.W., 2520, Aug. 24, Weirs & sluices.
 Lowden, G. (Brewer), 1924, June 25, Operating sewing- [machines, &c].
 Lowe, C., 3005, Oct. 11, Treating coal gas tars.
 — G., & Cooper, E.W., 2600, Sep. 2, Sewing-machines.
 — T., 965, Apr. 2, Paper-pulp.
 — T., 2773, Sep. 19, Breathing in impure atmospheres.
 Lowry, G., 1856, June 20, Radial drilling machines.
 — G., 1966, June 29, Hackling machines.
 Lucas, A.A. (Abel), 3923, Dec. 27, Paper-weights, boxes, &c.
 Lucas, E. F. R., 747, Mar. 11, Coking pitch; solid hydro- [carbons].
 Lucius, E., Brüning, A., & Meister, W., 2649, Sep. 6, [Colouring matter for dyeing, &c].
 Luckenbach, F. A. (Lake), 1585, May 23, Paving blocks.
 Ludlam, E., 3511, Nov. 23, Sifting cinders, &c.
 Lund, C., 1306, May 1, Opening preserved food tins.
 — C., 3328, Nov. 9, Instrument for cutting open metal [boxes, &c].
 Lunge, G., & Roeckner, C.H., 463, Feb. 14, Paper-makers' [boilers, &c].
 Lutschaunig, A., & Ricketts, J., 1907, June 24, Defacing [postage stamps].
 Lutscher, A., Grininger, F., Storck, H., & Hentsch, E. & [A. (Browne)], 2286, July 30, Treating phosphate, &c.
 — A., Grininger, F., Storck, H., & Hentsch, E. & [A. (Lyte)], 3552, Nov. 26, Acetate of alumina.
 — A., Grininger, F., Storck, H., & Hentsch, E. & [A. (Lyte)], 3585, Nov. 28, Treating phosphoric [acid for phosphates, &c].
 — A., Grininger, F., Decotegnie, A., Storck, H., [& Hentsch, E. & A. (Lyte)], 3685, Dec. 5, Dis- [tilling, &c].
 Lüttringhaus, G., 1075, Apr. 11, Cutting out metal plates.
 — G., 1102, Apr. 13, Lock for bags, &c.
 Lwoff, M. P. (Doublt), 1649, May 31, Preparing iron to [resist tension].
 Lyall, J., 3377, Nov. 13, Looms.
 Lyman, W. (Harris), 1568, May 22, Wheel hubs.
 Lynch, T., 1861, June 20, Preventing railway collisions.
 Lynde, F. G., & Story, J. S., 2791, Sep. 20, Excavating [machine].
 Lysons, L. G., & Forbes, H. V., 1634, May 30, Paints.
 Lyte, F. M. (Storck, Hentsch, Hentsch, Lutscher & Grin- [inger]), 3552, Nov. 26, Acetate of alumina.
 — F. M. (Storck, Hentsch, Hentsch, Lutscher & Grin- [inger]), 3585, Nov. 28, Treating, &c. phosphoric [acid for phosphates, &c].
 — F. M. (Storck, Hentsch, Hentsch, Lutscher, Grin- [inger & Decotegnie]), 3685, Dec. 5, Distilling, &c.
 Lyttle, W. A., 31, Jan. 4, Asphalt pavements.
 — W. A., 109, Jan. 13, Telegraph poles; fixing wires.
 — W. A., 867, Mar. 22, Telegraphic and other poles.
 — W. A., 1213, Apr. 23, Telegraph and other poles.
 — W. A., 1264, Apr. 27, Asphalt.
 — W. A., 1320, May 2, Attaching telegraph wires [to insulators; protecting insulators].
 — W. A., 1321, May 2, Ships and boats.

Lyttle, W. A., 1811, June 15, Railway sleepers; iron.
 — W. A., 1814, June 17, Tramways and railways.
 — W. A., 2212, July 25, Conveying sea water inland.
 — W. A., 2463, Aug. 19, Railway & tramway sleepers.
 — W. A., 3206, Oct. 29, Telegraph insulators; [attaching wires to same].
 — W. A., 3741, Dec. 10, Candles.

M.

Maardt, J. G., & Erichsen, J. (Jensen), 1122, Apr. 15, [Coke ovens; salt].
 — J. G., & Erichsen, J. (Jensen), 1423, May 10, [Coke ovens, &c].
 McAdam, W., 3924, Dec. 27, Bricks and building blocks.
 McArthur, P., & Kerr, J. (Clachar), 792, Mar. 15, Bale [presses].
 Macaulay, H., Waide, F. W., & Morgan, J. C., 3439, [Nov. 18, Water-waste preventers].
 — J., 2570, Aug. 29, Weaving.
 McBride, W. C., 1721, June 7, Scutching flax, &c.
 Maccallum, P., 3040, Oct. 15, Artificial fuel.
 McCarter, J. W., 3890, Dec. 23, Condensing steam.
 McClintock, E. (Clark), 1061, Apr. 10, Postal cards.
 McCloy, R., & Hunter, W., 2661, Sep. 7, Spinning, &c.
 McColl, D., & Gillespie, J., 2939, Oct. 5, Furnaces.
 McComb, J. J. (Cook), 2942, Oct. 5, Bale-ties.
 McComb, J. J. (Newton), 1136, Apr. 17, Preserving [animal and vegetable substances].
 — J. J., & Mahan, F.M. (Newton), 1058, Apr. 10, [Spring motive-power].
 McCrea, A. L. (Hunt), 450, Feb. 13, Postal cards.
 Macdiarmid, A. S., 192, Jan. 20, Cleaning wool skins.
 McDine, J., & Pooley, W. O., 3011, Oct. 12, Cleaning, [&c. fibres].
 McDonald, J., 3115, Oct. 22, Artificial stone.
 McDonald, J. (Lake), 2695, Sep. 11, Cotton materials, &c.
 Macdonald, J. C., & Calverley, J., 3537, Nov. 25, Printing [machinery].
 McDonald, P., 352, Feb. 3, Stamping and endorsing.
 Macdonald, Thomas, & Eskrett, C., 62, Jan. 8, Preventing [sticking of valves].
 McDonald, Timothy, & Weston, E. R. (Lake), 2684, [Sep. 10, Burnishing photographs, &c].
 MacDonnell, I., 2255, July 29, Printing.
 McDougall, A., 145, Jan. 17, Sulphuric acid.
 — A., 311, Jan. 31, Salt.
 — J., 2801, Sep. 21, Manures.
 McDowell, R., Klopsk, A., Grumel, V., & Palliser, J. [(Weatherdon)], 3231, Oct. 31, Bleaching [fabrics, &c].
 McEntee, W. C., 518, Feb. 17, Horse-shoes, &c.
 McEvoy, C.A., 832, Mar. 19, Connecting electric cables, &c.
 — C. A., 2085, July 10, Circuit closers for tor- [pedoes, &c].
 Macfarlane, D. & R., 2384, Aug. 10, Dyeing.
 — J. R., 3193, Oct. 28, Gas furnaces.
 MacFarlane, R., 1779, June 12, Producing paper-pulp from [wood; making steam tight joints].
 Macfarlane, R. & D., 2384, Aug. 10, Dyeing.
 MacFarlane, T.D., 2516, Aug. 24, Loading and discharging [grain].
 Macgillivray, A., & Cross, G. J., 1446, May 13, Cleaning [tramway rails].
 McGregor, A., 1816, June 17, Horse-rakes.
 — A., 1187, Apr. 20, Reaping and mowing.
 McIlwham, J., & Muir, M. A., 2092, July 11, Shuttle [boxes].

- McIlwham, J., Robertson, W., Orchar, J. G., & Muir, M. A., [1867, June 21, Winding yarn.
- Macintosh, J., & Boggett, W., 137, Jan. 17, India-rubber [hollow vessels for various uses.
- J., & Boggett, W., 2554, Aug. 28, Life preservers, air beds, &c.
- J., & Boggett, W., 2947, Oct. 7, Treating and [applying animal membranes.
- J., & Boggett, W., 3757, Dec. 11, Head protectors.
- McIntyre, J., 3279, Nov. 5, Governors.
- P., 1505, May 17, Shirts.
- Mack, C. H., 147, Jan. 17, Artificial teeth.
- McKay, B. T., & Hulse, W. W., 381, Feb. 6, Floor-cloth.
- Mackay, J., 3047, Oct. 16, Ruling paper.
- McKelvie, J., 2855, Sep. 27, Gas.
- Macken, F. (Spineux), 3354, Nov. 11, Preparing & spinning fibres.
- McKenzie, Alexander, 3484, Nov. 21, Operating carriage [heads.
- Alexander, 3627, Dec. 2, Carriages.
- Archibald, 1681, June 4, Restoring heat to [furnaces.
- Mackenzie, A. R. D., 980, Apr. 3, Iron steam-ships.
- D., 2645, Sep. 5, Self-acting reader for the [jacquard.
- H. S., & Vivian, J., 2217, July 25, Screw [propulsion.
- H. S., & Vivian, J., 3251, Nov. 2, Weighing [and strain testing.
- McKenzie, R., 1113, Apr. 15, Railway and other tickets.
- W., & Macrone, W., 1916, June 25, Stereo-type plates.
- Mackie, S. J., 2693, Sep. 11, Gun-cotton.
- McKislay, P., 2405, Aug. 13, Hulling & cleaning rice, &c.
- Mackinnon, H., 3951, Dec. 30, Lamps.
- McKinnon, L. A. E., 1464, May 14, Extinguishing fire.
- Mackintosh, J., & Irvine, R., 1604, May 27, Paper stock.
- Maddy, G. T., 1325, May 2, Supplying cotton, &c., to [sewing-machines.
- McKnight, C. G., & Howland, T. A., 3502, Nov. 22, Gas.
- McLara, W., 2021, July 4, Sawing wood.
- McLaurin, P., 2788, Sep. 20, Pasting paper.
- McLean, J. C., 2681, Sep. 10, Feeding fuel to fireplaces, &c.
- McLennan, J., 3151, Oct. 24, Steam-ploughs.
- McLeod, A. C., 2299, Aug. 1, Imparting motion to [drills, &c.
- McLeod, R. A. (Lake), 443, Feb. 12, Bridges, &c.
- McMurray, J., 3255, Nov. 2, Straining paper-pulp.
- McNaught, J. & W., 3045, Oct. 16, Scouring & washing [wool, &c.
- W. & J., 3046, Oct. 16, Scouring & washing [wool, &c.
- McNaughton, D., & Deans, P. D., 453, Feb. 13, Sulphate of ammonia.
- McNaughton, J., Duncan, A. R., Kerr, W. H., & [Brydges, C. J., 1137, Apr. 17, Fire-arms.
- McNeile, A., 1781, June 12, Cutting or shaping wood.
- Macneill, Sir J., 2390, Aug. 10, Signalling in trains.
- T. T., 1353, May 3, Subterranean railways, &c.
- Macomber, D. O., 268, Jan. 27, Ordnance.
- Macpherson, C., 564, Feb. 21, Ventilating sewers, &c.
- Macqueen, J., & Rushton, T. H., 2737, Sep. 14, Combing [fibres.
- Macrone, W., & McKenzie, W., 1916, June 25, Stereo-type plates.
- McVey, R., 1278, Apr. 29, Steam-engines.
- Madden, J. (Bourne), 118, Jan. 15, Cotton-gins.
- Maddison, W. P., 1798, June 14, Raising water from [mines, &c.
- Maddock, J., 2846, Sep. 26, Railway signals.
- Maddox, J., Dixon, G., & Hughes, T., 1526, May 18, [Cutting arrangement for looms.
- Maddy, J., 1976, July 1, Steam-engines.
- Magaud, H., 2113, July 13, Feather trimmings.
- Magnier, Pouilly, Brunet & Co., & Prévost, G. (Johnson), [3196, Oct. 28, Spinning fibres.
- Magnus, G. E., 3831, Dec. 18, Artificial marble.
- Mahan, F. M., & McComb, J. J. (Newton), 1058, [Apr. 10, Spring motive-power.
- Maine, S. C., 3612, Nov. 30, Ventilator for railway cars, &c.
- Maker, W., Jefferies, C. H., & Hollands, E. R., 1663, June 1, [Fluid meters.
- Madam, A., 3180, Oct. 26, Gas.
- Malbère, E., 852, Mar. 20, Lace.
- Mallet, R., & Scholefield, H., 2952, Oct. 7, Massing [mineral substances.
- Mallett Manufacturing Co. (Hughes), 3832, Dec. 18, Making needles.
- (Hughes), 3920, Dec. 26, [Scouring, &c., needles.
- Mallison, J., & Hacking, W. H. & T., 2858, Sep. 28, [Sizing and drying machines.
- Mallory, G. (Fish), 1303, May 1, Locking nuts on bolts.
- G. W. (Lake), 830, Mar. 19, Raising, &c., boats.
- Malo, A. A. L., & Robin, T. (Johnson), 610, Feb. 26, Asphalt roads.
- Malortie, C. Baron de, & Woods, J. E. T., 3803, Dec. 16, [Preserving food.
- Manbré, A., & Allibon, G., 318, Feb. 1, Steam-boilers.
- Manceaux, F. J., 3914, Dec. 24, Cartridges.
- Manent, J. J. F., 963, Apr. 2, Pumps.
- Manfield, M. P., 2793, Sept. 20, Boots and shoes.
- Manico, E., 1090, Apr. 12, Forming embankments.
- Mann, R. J. (Lake), 1064, Apr. 11, Sieves.
- Mann, W., 3897, Dec. 24, Gas retorts.
- W. C., & Redihalg, G., 3002, Oct. 11, Hats.
- W. D'A., 2998, Oct. 11, Railway carriages & fittings.
- Manning, J. A., 3356, Nov. 11, Treating faecal matters.
- Manson, G. W. (Haseltine), 3601, Nov. 30, Motor for [sewing-machines, &c.
- Manwaring, W., & Pidgeon, D., 629, Feb. 28, Reaping [machines.
- W., & Pidgeon, D., 1623, May 29, Reaping [machines.
- W., & Pidgeon, D., 3030, Oct. 15, Reaping [machines.
- Maquin, J., & Griffin, J. T. (White), 703, Mar. 7, [Weaving shuttles.
- March, T. C., 3212, Oct. 30, Applying glass, &c. to [ornamenting furniture, &c.
- Marchant, F. G., 2068, July 9, Wheels for road engines, &c.
- F. G., 3263, Nov. 2, Shoes for horses, &c.
- R. M., & Angell, B. J., 1356, May 4, Horse-shoes.
- Marcus, E. W., 3567, Nov. 27, Counteracting motion [in vessels.
- Marcus, S. (Abel), 3058, July 8, Air-gas.
- Marcy, L. J. (Woodbury), 1563, May 22, Magic lanterns.
- Marée, J. B., & Varlet, — (Smith), 442, Feb. 12, Card-ing engines.
- Marelli, A. & S. (Clark), 3488, Nov. 21, Fire-arms.
- S. & A. (Clark), 3488, Nov. 21, Fire-arms.
- Marie, C. de Sainte, 3335, Nov. 9, Tanning.
- Marinoni, A. H. (Clark), 2041, July 5, Printing.
- Marland, O., 3815, Dec. 17, Governors.
- Maroni, M. (Murdoch), 275, Jan. 29, Gas lamps.
- Marrian, H. 1797, June 14, Lozenges, &c.
- Marriott, W., 3322, Nov. 8, Salts and oxides of lead.
- Marsden, H., & Blamires, T. H. & H., 708, Mar. 7, Card-ing engines.
- H. L. D., 499, Feb. 16, Producing prints or [impressions.
- H. M., 1741, June 10, Wool shears, weavers' [pickers, and joiners' plane irons.

- Marsden, H. R., 649, Mar. 1, Stone-breakers.
 — H. R., 2057, July 8, Stone-breakers.
 Marsh, C. W. E., 460, Feb. 14, Signalling in railway trains.
 — C. W. E., 462, Feb. 14, Water-meters.
 — T. 3408, Nov. 15, Lubricating spindles.
 Marshall, B. W. and others (Edwards), 777, Mar. 14,
 [Dial plates for clocks, &c.
 Marshall, R. W., 1357, May 4, Bearings.
 — W., 824, Mar. 19, Clog bottoms.
 Martel, L. F. A., & Cumin, J. L. (Clark), 2677, Sept. 9,
 [Casting metals.
 Martin, Celestin (Bonneville), 1078, Apr. 11, Spinning.
 — Celestin (Bonneville), 3653, Dec. 4, Spinning.
 Martin, Claude, 2597, Aug. 31, Chains for chain cables, &c.
 — Claude & H., 1632, May 30, Anchors.
 — H. & C., 1632, May 30, Anchors.
 — John, & Wheeler, J. A., 3066, Oct. 17, Raising
 [and tilting casks.
 Martin, Joseph (Lake), 501, Feb. 16, Weaving shuttles.
 — L., & Bosshard, H. (Gilbee), 3191, Oct. 28,
 [Governors.
 — P. E. (Smith), 768, Mar. 14, Gases for heating, &c.
 — S. B., & Beath, J. M. (Lake), 2210, July 24,
 [Making ice; cooling rooms, &c.
 Martin, T. J., & Harper, J. M., 2828, Sep. 25, Com-
 [pound steam-engines.
 Martinier, L. (Clark), 2633, Sep. 14, Sharpening saws.
 Mason, J., 2780, Sep. 19, Pens and penholders.
 — J., 2842, Sep. 26, Metallic pens and holders;
 [wood screws.
 Massas, F. A. E. G. de (Bonneville), 1552, May 21,
 [Treating cotton seeds.
 Massey, G. B. (Clark), 1351, May 3, Rotary-engines.
 Mather, E., 1603, May 27, Treating fibres.
 Mathews, C. R., 920, Mar. 26, Fixing, &c., gas-fittings.
 — J. (Hancock), 2051, July 6, Dressing ores.
 — S., 2579, Aug. 30, Fire-arms.
 Matthews, W., 1983, July 1, Cover for show cases, &c.
 Mattson, M., 2251, July 27, Administering injections, &c.
 Maurel, H. S., 3479, Nov. 21, Ruling paper.
 Maurice, S., & Pyme, P. (Franklin), 332, Feb. 2, Capsules.
 Maw, A., 2360, Aug. 8, Preparing clay for encaustic
 [tiles, &c.
 — W. H., 1086, Apr. 12, Docks for floating fire-engines.
 Mawhinney, H. H. (Wiggin), 1403, May 8, Eyeletting
 [machines.
 Mawrin, G. Toiray- (Lawranson), 2479, Aug. 21, Book
 [and paper binders.
 Maxwell, G., 1868, June 21, Bricks and tiles.
 Maxwell, J. R., & Cope, E. (Benson), 104, Jan. 13,
 [Steam-engines.
 — J. R., & Cope, E. (Benson), 3617, Dec. 2,
 [Cylinders and valves of steam-engines, &c.
 May, D., & Coates, J. C., 168, Jan. 18, Neck-ties & scarves.
 — W., & Quadling, E., 3559, Nov. 27, Metal tubes.
 — W. H., 743, Mar. 11, Stoppers for bottles and jars.
 Mayall, S., & Smith, I., 2835, Sep. 25, Roving, spinning
 [and doubling.
 Mayell, J. C., & Knowles, J., 1579, May 23, Cooking
 [apparatus.
 Mayer, C. (George), 3777, Dec. 13, Capsule for bottles, &c.
 Mayer, J., 1582, May 23, Scissors, shears and forceps.
 — M., & Deshayes, A. V., 1251, Apr. 26, Embroidering.
 Mayler, H., 20, Jan. 3, Ships' berths.
 Maynard, R. 1222, Apr. 24, Husking and dressing seeds.
 — R. 1228, Apr. 24, Horse-hoes and drills.
 — R., 3674, Dec. 5, Straw-elevators.
 — T., 1436, May 11, Bricks and kilns.
 Meakin, J. F., 2278, July 30, Sliding window-sashes.
 Mee, J. A., 1549, May 21, Drawing wire.
 Mehu, A. (Bonneville), 2911, Oct. 3, Lashing for ships'
 [stays.
 Meister, W., Lucius, E., & Brünig, A., 2649, Sep. 6,
 [Colouring matter for dyeing, &c.
 Meiter, C. W., Smith, T. W., & Minasi, C., 3457, Nov. 19,
 [Tobacco pouches.
 Mekarski, L. (Lake), 3338, Nov. 9, Air-motor.
 Meldrum, E., 985, Mar. 28, Purifying oils and paraffine.
 Melling, J. W., 682, Mar. 5, Steam or other fluid engines.
 — J. W., 2155, July 18, Steam and other engines.
 Mellor, G. K., & Sheffield, G. V. (Clark), 399, Feb. 7,
 [Sewing leather and thread for same.
 Mellor, H. M., 3937, Dec. 27, Hosiery goods.
 Mendel, S., 380, Feb. 6, Stamping trade marks on fabrics.
 — S., 3747, Dec. 10, Packing bales.
 Meneely, G. R. (Lake), 2050, July 6, Welding brass upon
 [iron or steel; axle-bearings, &c.
 Menere, H. W., & Thomas, D. & J. (Lake), 897, Mar. 23,
 [Mounting and working ordnance.
 Menet, H., Gally, G., Oswald, J., & Peigner, F., 3183,
 [Oct. 23, Imitation ceramic ware.
 Menzies, R. C., & Davies, A. E., 1476, May 15, Paper-pulp.
 Mercader, E. de, & De Terré, A. (Watteau), 752, Mar. 12,
 [Explosive compounds.
 Mercer, S. L. (Lake), 120, Jan. 15, Threading needles.
 Mercier, C. J., 1733, June 8, Ventilating waterproof
 [clothing.
 Meriton, T., 3593, Aug. 31, Regulating speed of engines.
 Merrylees, J., 1921, June 25, Weaving ornamental fabrics.
 Meserole, C. M., & Webster, W. (Newton), 344, Feb. 2,
 [Terry and cut-pile carpets, &c.
 Messenger, T. G., 1545, May 21, Pipe couplings, valves, &c.
 Mestre, J. A. de (Bonneville), 174, Jan. 19, Securing
 [corks in bottles.
 — J. A. de (Bonneville), 2211, July 25, Wire
 [coverings for securing corks in bottles.
 Mesurier, W. H. Le, 566, Feb. 22, Roofing buildings.
 Metallurgical Society, Ponsard (Johnson), 424, Feb. 10,
 [Furnaces for zinc ores.
 — (Johnson), 426, Feb. 10,
 [Treating zinc ores, &c.
 — (Johnson), 1018, Apr. 5,
 [Heating.
 — (Johnson), 1409, May 8,
 [Treating ores.
 — (Johnson), 2480, Aug. 21,
 [Supplying hot-blast to furnaces.
 Metcalf, S., 3909, Dec. 24, Self-acting mules.
 Mettam, C., & Sanson, J. S. (Newton), 46, Jan. 5, Lu-
 [bricating railway axles.
 Meunier, L. F., 3164, Oct. 25, Purifying feed water.
 Mewburn, J. C. (Droulers-Vernier), 511, Feb. 17, Hack-
 [ling machines.
 — J. C. (Fastré), 779, Mar. 14, Alarm for steam-
 [boilers.
 — J. C. (Harrass), 913, Mar. 26, Cigarettes.
 — J. C. (Moreau), 3177, Oct. 26, Railway sig-
 [nalling.
 — J. C. (Farinaux), 3404, Nov. 15, Purifying
 [feed water.
 Meyer, H., Klotz, Made., & Klotz, E. & V. (Clark), 47,
 [Jan. 5, Neck-ties.
 Meyer, J. C., 2951, Oct. 7, Steam-boilers and furnaces.
 Michaelis, P. (Becker), 1566, May 22, Stoppering bottles.
 — P. (Becker), 1567, May 22, Bottle capsules.
 — P. (Becker), 2686, Sep. 11, Capsuling bottles.
 Michaels, J. P., & Broadwell, L. W. (Smith), 469,
 [Feb. 14, Retarding railway trains.
 — J. P., & Broadwell, L. W. (Smith), 477,
 [Feb. 15, Railway carriages.
 Michea, P. P. F., 2786, Sep. 20, Dyeing, printing & tanning.
 — P. P. F., 2787, Sep. 20, Dyeing, printing and tan-
 [ning; paper, &c.
 Michele, V. D. de, 3371, Nov. 12, Portland cement.

- Michelet, J. C., 2323, Aug. 3, Converting alternate into [continuous motion].
- Michel, I. & R., Doty, E., & Miltimore, G. W. (Clark), 220, Jan. 23, Railway axles and wheels.
- R. & I., Doty, E., & Miltimore, G. W. (Clark), 220, Jan. 23, Railway axles and wheels.
- Middlemass, J., 2757, Sep. 17, Clerical costume.
- Middleton, J., 265, Jan. 27, Adjusting ships' compasses.
- Middleton, J. W. (Haseltine), 1801, June 14, Iron & steel.
- Middleton, R. E., 1925, June 25, Breaking stones, &c.
- R. H., 3671, Dec. 4, Mule indicators.
- T. A., 945, Mar. 30, Envelope machines.
- Midelton, T., 1227, Apr. 24, Increasing adhesion in loco- [motive engines].
- T., 2656, Sep. 7, Rails and railways.
- Mignon, J. B. J., & Rouart, S. H. (Johnson), 3422, Nov. 16, [Freezing; regulating flow of liquids].
- J. B. J., Rouart, S. H., & Gauduin, O. (Johnson), 3970, Dec. 31, Depositing copper and alloys.
- Mignot, A. V. de, & Ganter, J., 1481, May 15, Compressed [gas-engines].
- Milburn, R., & Jackson, H., 2266, July 30, Drying and [pulverising].
- Miles, W. A. (Clark), 762, Mar. 13, Battery guns.
- Mill, R., 2367, Aug. 8, Steam-boilers.
- Millar, Adam, 244, Jan. 25, Counting apparatus.
- Millar, Alexander, & Bezer, H., 3114, Oct. 22, Registering [apparatus for vehicles].
- Millen, W., & Muir, J., 2549, Aug. 27, Punch & drill holder.
- Miller, B., 3416, Nov. 16, Punching, cutting, &c. metals.
- D. C., 3926, Dec. 27, Distilling, &c. solutions.
- J., 2033, July 5, Treating hydro-carbons.
- J. J., & Coxhead, F. C., 2252, July 27, Marine [steam-engines].
- Miller, L. (Lake), 481, Feb. 15, Harvesting machines.
- Mills, B. J. B. (Cathcart, Ezekiel, & Faetz), 61, Jan. 8, [Hooks].
- B. J. B. (American Seal-Lock Co.), 252, Jan. 25, [Seal-locks].
- B. J. B. (Timby), 585, Feb. 23, Railway rails or bars.
- B. J. B. (Bolette), 633, Feb. 29, Carding engines.
- B. J. B. (Sinclair & Lange), 1130, Apr. 16, Sheet iron.
- B. J. B. (Hutchinson), 1140, Apr. 17, Extracting [oil, fat, resin, &c.].
- B. J. B. (Demeure), 1384, May 6, Heating air.
- B. J. B. (Dorlan), 2029, July 4, Sizing paper, [cotton, &c.].
- B. J. B. (Bennett), 2283, July 30, Rotary engines [and pumps].
- B. J. B. (Heyl & Brehmer), 2291, July 31, Match [boxes, &c.].
- B. J. B. (Davis), 2970, Oct. 9, Electro-magnetic clocks.
- B. J. B. (Post), 3318, Nov. 8, Cleansing cotton [waste, &c.].
- B. J. B. (Wood & Skinner), 3389, Nov. 14, Cleans- [ing and smutting grain, &c.].
- D., & Pearson, M., 2796, Sept. 21, Looms.
- J. H., 1038, Apr. 8, Generating heat by gas.
- J. H., 1039, Apr. 8, Steam-boilers.
- Mills, W. J. B., & Taylor, De W. C. (Lake), 500, Feb. 16, [Boots and shoes].
- W. J. B., & Taylor, De W. C. (Johnson), 1470, [May 14, Shoes].
- Millward, J. (Athins & Drew), 1850, June 19, Musical [instruments].
- J. (Fricker), 1945, June 27, Street hydrants.
- J. (Fishburn & Fishburn), 2589, Aug. 31, [Sewing-machines].
- Milner, Edward, 1881, June 22, White pigments from lead.
- Ezra, 3117, Oct. 22, Consuming smoke in furnaces.
- Ezra, 3282, Nov. 5, Treating smoke from furnaces.
- J., & Fleming, F., 3337, Nov. 9, Flattening wire.
- Milroy, J., 1788, June 13, Foundations, piers, quays, &c.
- J., & Butler, J. W., 879, Mar. 22, Coffin dams.
- Miltimore, G. W., Michel, R. & I., & Doty, E. (Clark), 220, Jan. 23, Railway axles and wheels.
- Milton, G., & Stother, G., 1680, June 4, Folding desks.
- Milward, V., 3227, Oct. 31, Polishing needles.
- Minasi, C., Meiter, C. W., & Smith, T. W., 3457, Nov. 19, [Tobacco pouches].
- Mines, H. E., 2733, Sept. 13, Kitchen ranges.
- Mingrat, J., Vansteenkiste, A., & Dugdale, A., 1682, [June 4, Cocks].
- Minns, H. R., 596, Feb. 24, Metal doors.
- H. R., 627, Feb. 28, Tramways, railways & wheels.
- Minter, T. W. (Clark), 1614, May 28, Engraving, cut- [ting, & carving].
- Mirfield, M., & Scott, J., 1661, June 1, Preparing fibres [for spinning].
- Mitchel, W. H., 3104, Oct. 21, "Chronometric" governors.
- Mitchell, G., & Jarman, H., 338, Feb. 2, Heating ovens, [boilers, &c.].
- John, & Pollock, J. F. M., 1200, Apr. 22, Kilns.
- John, & Morrison, W., 2937, Oct. 4, Mules.
- Jonathan, 183, Jan. 19, Furnace bars & bearers.
- Joseph, 3525, Nov. 25, Fuel.
- Joseph, & Newton, W. E., 2767, Sept. 18, [Carriage springs].
- Mitchell, R. (Lake), 3239, Nov. 1, Bending metal tubes.
- Mitchell, T., 1042, Apr. 8, Doubling and twisting yarns.
- W., 1363, May 4, Felt carpets.
- W., 2005, July 2, Ladders.
- W., & Warnes, W., 2100, July 11, Stacking hay, &c.
- W. H., & Jordinson, R., 3891, Dec. 23, Carding [engines].
- Molesworth, J., 655, Mar. 2, Stench trap and ventilator.
- J., 833, Mar. 19, Elastic gusset webs.
- Mollady, J., 234, Jan. 24, Felt hats.
- Möller, A., & Füngling, H. (Johnson), 1077, Apr. 11, [Rotary steam-engines].
- F. O. (Morgan-Brown), 3067, Oct. 17, Compo- [sition for preserving wood, &c.].
- Molloy, B. C., & Fitzgerald, D. G., 1376, May 6, Decom- [posing compound substances by electricity].
- Monckton, E. H. C., 423, Feb. 10, Peat fuel, charcoal, &c.
- E. H. C., 1460, May 14, Furnaces.
- Monnier, G. le, & Cochet, J., 1844, June 19, Advertising.
- Monte, G. la, Saxe, G. G., & Clayton, C. H. (Haseltine), 2670, Sep. 9, Colored and figured paper.
- Montebello, C. Count of (Browne), 510, Feb. 17, Treating, &c. [vegetable fibres].
- Monteith, R. (Urquhart), 837, Mar. 19, Preserving [substances].
- Montgomerie, J. C., 79, Jan. 10, Heating blast for furnaces.
- Montoisson, J. L. de, 12, Jan. 2, Removing the hair, &c. [from skins].
- J. L. de, 13, Jan. 2, Tanning.
- J. L. de, 2001, July 2, Removing hair, &c. [from skins].
- J. L. de, 2002, July 2, Tanning.
- Moore, A. & A. C., 586, Feb. 23, Roll caps for metal roofing.
- A. C. & A., 586, Feb. 23, Roll caps for metal roofing.
- G. M., 2351, Aug. 7, Evaporating alkaline liquors; [heating and refrigerating solutions, &c.].
- T., 3222, Oct. 31, Self-acting mules.
- Moorhouse, S., & Kendall, W. J., 740, Mar. 11, Com- [municating in trains].
- S., & Kendall, W. J., 910, Mar. 26, Umbrellas [and parasols].
- More, J. W., & Norman, J., 139, Jan. 17, Clipping horses, &c.
- Moreau, V. (Mewburn), 3177, Oct. 26, Railway signalling.
- Morel, H. L., & Riboulet, G. A. M., 3098, Oct. 19, Velvets, &c.
- Morfit, C., 140, Jan. 17, Refining fat oils.
- C., 2341, Aug. 6, Phosphates of lime.

- Morfit, C., 2344, Aug. 7, Phosphates of lime.
 — C., 2357, Aug. 8, Artificial guano for treating [sewage, sugar, &c.]
 — C., 2545, Aug. 27, Vats for chemical purposes, &c.
 — C., 2822, Sept. 24, Phosphates of lime.
 Morgan, A., 3460, Nov. 20, Purifying, &c. gum resins.
 Morgan, A. R. (Newton), 266, Jan. 27, Kilns for burning [bricks, &c.]
 Morgan, C. G., 2806, Sept. 23, Fastenings for window [sashes, &c.]
 — E. R. C., 1099, Apr. 13, Communicating in trains.
 — J., 2503, Aug. 23, Medical inhaler.
 — J. C., Macaulay, H., & Waide, F. W., 3439, [Nov. 18, Water-waste preventers.]
 — W., 636, Feb. 29, Baskets for coaling ships.
 Morgan-Brown, W. (Fuller), 950, Mar. 30, Horse-shoe [nails, &c.]
 — W. (Goulding), 1270, Apr. 27, Steam- [generators.]
 — W. (Cottle), 1350, May 3, Centrifugal [machines.]
 — W. (Jarosson & Pack), 1710, June 6, [Dyeing.]
 — W. (Lambart), 1859, June 20, Boots and [shoes.]
 — W. (Elwert & Pack), 1880, June 22, [Ammonia.]
 — W. (Fuller), 1977, July 1, Horse-shoe nails.
 — W. (Gallaher), 2064, July 9, Type- [wheels for printing-telegraphs.]
 — W. (Gallaher), 2073, July 10, Telegraph [printing instruments.]
 — W. (Wessman), 2081, July 10, Unison [stop for printing-telegraphs.]
 — W. (Houghton), 2268, July 30, Raising [water.]
 — W. (Fuller), 2432, Aug. 15, Horse-shoe [nails.]
 — W. (Dodge), 2464, Aug. 19, Splitting [leather.]
 — W. (Ashe), 2706, Sep. 12, Sewing-ma- [chines.]
 — W. (Keith), 2735, Sep. 14, Attaching [buttons.]
 — W. (Brooks), 2736, Sep. 14, Boots & shoes.
 — W. (Rowe), 2739, Sep. 14, Telegraphs.
 — W. (Hotchkiss), 3065, Oct. 17, Ordnance [and cartridges.]
 — W. (Müller), 3067, Oct. 17, Composition [for preserving wood, &c.]
 — W. (Dunham), 3213, Oct. 30, Oakum.
 — W. (Amberg), 3220, Oct. 31, Self-index- [ing holder, file & binder for letters, &c.]
 — W. (Schultz), 3614, Nov. 30, Fastenings [of stays, &c.]
 — W. (Brunt), 3731, Dec. 9, Chimney cowl.
 — W. (Beisson), 3873, Dec. 20, Railways.
 Morris, M. C. F. C. de (Clark), 2785, Sep. 19, Propelling [vessels.]
 Morison, B. (Lake), 373, Feb. 5, Sheet iron.
 Morisseau, G. D., 925, Mar. 27, Buttons for gloves.
 Morong, E. P. (Haseltine), 3759, Dec. 11, Wood-pavements.
 Morrall, E., 398, Feb. 7, Sewing-machine needles.
 Morrell, J. A. (Lake), 680, Mar. 5, Refined sugar, &c.
 Morrell, J. C., & Proctor, J., 3888, Dec. 23, Privies & closets.
 Morrill, O. (Haseltine), 3844, Dec. 18, Sewing-machines.
 Morris, J., 1728, June 7, Finishing printed sheets of paper.
 — R. W., 2363, Aug. 8, Revolving shutters.
 — T., 1386, May 7, Appliances for water service of [buildings.]
 — T., Fletcher, T. & C., & Kelly, M., 1848, June 19, [Spring-mattresses, &c.]
 Morris, T. S., 3029, Oct. 15, Steam-boilers.
 — W., 1457, May 14, Connecting service pipes with [mains.]
 — W., 2504, Aug. 23, Making connections with [water mains under pressure.]
 Morris, W. (Lake), 162, Jan. 18, Waterproofing leather, &c.
 Morris, W. J., 3883, Dec. 21, Pistols.
 Morrison, W., & Mitchell, J., 2937, Oct. 4, Mules.
 Mortensen, C. C. (Jensen), 791, Mar. 13, Boring through [earth, &c.]
 Mortlock, T., 34, Jan. 4, Dressing & furrowing millstones.
 — T., 2247, July 27, Irons, applicable for gas stoves.
 Morton, F. G., 96, Jan. 11, Feeding paper to brushes for [colouring, &c.]
 — F. G., 1739, June 8, Utilizing, &c. tin plate scraps.
 — F. G., 3676, Dec. 5, Treating tin plate waste.
 — J. C., 3496, Nov. 22, Coupling railway carriages, &c.
 Moseley, C., 1637, May 30, Condensing vapours of coal [tar naphtha.]
 — W., 3802, Dec. 16, Governors.
 Mosely, A., 1730, June 7, Fire-escapes.
 Moses, J. (Haseltine), 2493, Aug. 22, Curative electrical [apparatus.]
 Mosley, A., 3637, Dec. 3, Jacquard machinery.
 Moss, J. F., 2992, Oct. 10, School desks and seats.
 — R. S., & Crighton, W. J., 3024, Oct. 14, Blinds and [shutters.]
 Mot, A., & Weaver, G. E. (Lake), 734, Mar. 9, Propelling [vessels and machinery.]
 Motard, F. M. H., 2336, Aug. 6, Regenerating steam.
 Motay, C. M. Tessie, du, 2331, Aug. 5, Purifying cast [irons, &c.]
 Motay, C. M. Tessie, du (Smith), 2, Jan. 1, Treating lyes [in preparing fibres, &c.]
 Motiron, P. (Newton), 2603, Sep. 2, Spinning.
 Mouzin, A. (Dufrené), 1163, Apr. 19, Preserving fabrics [from moisture.]
 Mudford, G., 2582, Aug. 30, Straps, bands and belting.
 Mudge, R. C., 2731, Sep. 13, Turning over leaves of books.
 Mueller, C. G. (Lake), 2460, Aug. 19, Igniting gas.
 Muir, J., & Millen, W., 2549, Aug. 27, Punch and drill [holder.]
 — M. A., McIlwham, J., Robertson, W., & Orchar, J. G., [1867, June 21, Winding yarn.]
 — M. A., & McIlwham, J., 2092, July 11, Shuttle boxes.
 Muir, W. (Lake), 1112, Apr. 13, Sewing-machines.
 Muiron, V. (Rozsavolgyi), 3876, Dec. 21, Joints for ear- [rings, &c.]
 Mulholland, J. R. T., 2552, Aug. 27, Looms.
 Muller, E., & Eichelbrenner, A. (Lake), 200, Jan. 22, Fur- [naces; heating.]
 Müller, H. L. (Noot), 1629, May 29, Extracting nails, &c.
 — M. L., & Heinemann, L., 2768, Sep. 18, Composing [type.]
 Munro, A., 938, Mar. 30, Extracting hydro-carbons; [coke and charcoal.]
 Muratori, C., 1588, May 24, Substitute for iron and steel.
 Murdoch, H. H. (Maroni), 275, Jan. 29, Gas lamps.
 — H. H. (Baudot), 2837, Sep. 25, Loom for [tapestry, &c.]
 — H. H. (Bide & Co.), 2908, Oct. 2, Self-acting [mules.]
 — H. H. (Picard), 3350, Nov. 11, Tanning.
 — H. H. (Roche), 3647, Dec. 3, Pipe or tube joints.
 Murphy, J., 2647, Sep. 6, Railway wheels, &c.
 — W. J., 559, Feb. 21, "Rifling" fire-arms, &c.
 Murray, A. J., 1577, May 23, Treating sewage deposits.
 — C. H., 3384, Nov. 13, Chain-pumps.
 Muschamp, J. B., 883, Mar. 23, Liquid-meter.
 — J. B., 1040, Apr. 8, Beating & aerating eggs, &c.
 — J. B., 3218, Oct. 30, Preventing explosions.
 — J. B., & Hengst, C. F., 1752, June 11, Gas.

Musgrave, J., 3790, Dec. 14, Steam-boilers.
 — R. C. & W., 505, Feb. 16, Producing loops, &c.
 — W. & R. C., 505, Feb. 16, Producing loops, &c.
Mussey, W. B., & others (Edwards), 777, Mar. 14, Calender dial-plates for clocks, &c.
 Myerns, H., 1286, Apr. 30, Joining india-rubber.
Myers, A. G. (Lake), 316, Feb. 1, Detecting leaks in pipes.
 — A. G. (Lake), 321, Feb. 1, Lamp and other burners.
 — A. G. (Lake), 503, Feb. 16, Operating washing machines, &c.
 — A. G. (Lake), 1202, Apr. 22, Burner for lamps, &c.
 — A. G. (Lake), 1452, May 13, Pneumatic signal apparatus.
 — E. (Myers), 2362, Aug. 8, Gas-light apparatus.
 Myers, M., 273, Jan. 29, Caps and other head coverings.
 — S. (Myers), 2362, Aug. 8, Gas-light apparatus.

N.

Naegeli, A. (Barlow), 1203, Apr. 22, Cooling wort, &c.
 Napier, J., 2197, July 23, Substitute for coffer dams.
 — J. M., 402, Feb. 7, Weighing coins and coin blanks.
 — J. M., 2639, Sep. 5, Machine for weighing coins, &c.
 Nash, D., 2447, Aug. 16, Rocking cradles.
Nash, J. C., Armes, G. A., & Glassie, M. H. (Lake), 1957, [June 28, Fastenings for bedsteads, &c.
 Nash, R., 663, Mar. 4, Locks, keys, and box staples.
Nation, W. B., & Letchford, R. M., 890, Mar. 23, Paraffine.
 Naylor, B., & Gelderd, T., 1239, Apr. 25, Tilting casks, &c.
 — J. W., Fairbairn, Sir A., & Kennedy, T. S. [2533, Aug. 26, Preparing fibres.
 Needham, J., 3538, Nov. 25, Knives and forks.
 Negri, C. de, 76, Jan. 10, Paper-pulp.
 — C. de, Herrmann, G., & Guest, W., 736, Mar. 11, [Hat bodies, sacks, &c.
 — C. de, Herrmann, G., & Guest, W., 2158, July 18, [Braiding whips, &c.
 Negroni, J. L. de, 2198, July 23, Stopping bottles.
 — L. de, 3743, Dec. 10, Stopping horses.
 Neill, T., 3827, Dec. 17, Printing floor-cloths.
 — W., 906, Mar. 25, Valves of air cylinders.
Nes, C. M. (Johnson), 325, Feb. 1, Iron and steel.
Neuerburg, M. (Soul), 1980, July 1, Boring rocks, &c.
 — M. (Soul), 1558, May 22, Compressing air [or gases.
 — M. (Soul), 3765, Dec. 12, Boring rocks, &c.
 Neville, S., 813, Mar. 18, Lears for annealing glass.
 — S., 3862, Dec. 20, Ornamenting glass.
 Newall, P., & Barker, J., 2012, July 3, Dressing leather.
 — P., & Barker, J., 3336, Nov. 9, Rolling leather.
 — T., 3753, Dec. 11, Indicator for mules.
 Newbold, E., 2011, July 3, Furnace bars.
 Newell, L. D., 142, Jan. 12, Ships' state-rooms.
 — L. D., 1890, June 27, Ships' berths and sofas.
 Newman, G. G., & Bartholomew, E. G., 3329, Nov. 9, [Signalling and connecting wires in trains.
 Newnham, B. T., 1465, May 14, Carriages.
 Newsome, G., 1407, May 8, Emery rollers.
 — J., & Overend, J., 2873, Sep. 30, Steam-engines.
 Newsum, G., 2139, July 17, Lithographing and printing.
 Newton, A. V. (Mettam & Sanson), 46, Jan. 5, Lubricating railway axles.
 — A. V. (Reimann), 216, Jan. 23, Regulating warp [tension in looms.

Newton, A. V. (Morgan), 266, Jan. 27, Kilns for burn-
 [ing bricks, &c.
 — A. V. (Harris), 308, Jan. 31, Smelting furnaces.
 — A. V. (Webster & Meserole), 344, Feb. 2, [Terry and cut pile carpets, &c.
 — A. V. (Gateuil), 366, Feb. 5, Diaries.
 — A. V. (Singer Sewing Machine Co.), 489, Feb. 15, [Sewing-machines.
 — A. V. (Thompson), 506, Feb. 16, Lever punches, [&c.
 — A. V. (Fryer), 875, Mar. 22, Converting motions.
 — A. V. (Knight), 1012, Apr. 5, Electrottype [moulds.
 — A. V. (McComb & Mahan), 1058, Apr. 10, [Spring motive-power.
 — A. V. (McComb), 1136, Apr. 17, Preserving [animal and vegetable substances.
 — A. V. (Dod), 1658, May 31, Sugar.
 — A. V. (Beard), 1706, June 5, Bale-tie.
 — A. V. (Thorne), 1986, July 1, Tilling imple-
 [ments.
 — A. V. (Barlow & Walker), 2700, Sep. 11, [Mowing machines.
 — A. V. (Whitehill), 2759, Sep. 17, Driving sewing [machines, &c.
 — A. V. (Leavitt), 2784, Sep. 19, Air-engines.
 — A. V. (Patterson & Rowe), 3044, Oct. 15, Trusses.
 — A. V. (Rump), 3056, Oct. 16, Iron and steel [wire.
 — A. V. (Walter), 3142, Oct. 23, Furnaces.
 — A. V. (Whitehill), 3143, Oct. 23, Sewing-ma-
 [chines.
 — A. V. (Dod), 3588, Nov. 28, Sugar.
 — A. V. (Sloot), 3606, Nov. 30, Railway axle [boxes.
 — A. V. (Tilghman), 3626, Dec. 2, Cutting, &c. [hard substances.
 — A. V. (Thompson), 3698, Dec. 6, Pliers.
 — A. V. (Baxter), 3750, Dec. 10, Setting carbon [points.
 — E., & Cotter, W., 3783, Dec. 13, Saw-frames.
 — G. F., 2539, Aug. 26, Burnishing, &c. leather.
 — H. E. (Anderson), 1352, May 3, Drain pipes, &c.; [artificial stone.
 — H. E. (Harrington), 1751, June 10, Perforating [paper for telegraphic messages.
 — H. E. (Block), 3155, Oct. 24, Motive-power.
Newton, I. E., Stever, J., & Boughton, G. A. (Hughes), [2688, Sep. 11, Driving loom shuttles.
 Newton, J., & Price, W., 2402, Aug. 12, Consuming [smoke and saving fuel.
 — J., 3798, Dec. 14, Consuming smoke and saving [fuel.
 — L., & Swallow, J. T., 2343, Aug. 7, Drinking [vessels.
 — W. E. (Barre-Pin & Barre-Pin), 37, Jan. 4, [Preserving substances.
 — W. E. (Hoe), 45, Jan. 5, Printing machinery.
 — W. E. (Closson), 274, Jan. 29, Transmitting [motion.
 — W. E. (Emery), 406, Feb. 7, Weighing machines.
 — W. E. (Hoe), 545, Feb. 20, Lithographic printing.
 — W. E. (Osgood, Storer, & Keys), 576, Feb. 22, [Hoists and safety hatches.
 — W. E. (Thompson), 675, Mar. 5, Ordnance.
 — W. E. (Andrews), 676, Mar. 5, Hoists, &c.
 — W. E. (Thompson), 854, Mar. 21, Breech-loading [ordnance.
 — W. E. (Schneider), 917, Mar. 26, Telegraphs.
 — W. E. (Gwynn, Gilbert, & Barnes), 995, Apr. 4, [Packings for steam-engines, &c.
 — W. E. (Calland), 1025, Apr. 6, Governors.

Newton, W. E. (*Hoe*), 1109, Apr. 13, Type cases.
 — W. E. (*Thompson & Olson*), 1145, Apr. 17, [Distilling.
 — W. E. (*De Bisschop*), 1594, May 25, Caloric [engines.
 — W. E. (*Douillard*), 1729, June 7, Nocturnal [telegraphic signals.
 — W. E. (*Johnsen*), 1780, June 12, Self-cancelling [stamps, &c.
 — W. E. (*Thompson*), 1864, June 20, Stench-traps, [stamps, &c.
 — W. E. (*Turner & Vanderpool*), 1905, June 24, [Vinegar; acidulating liquids.
 — W. E. (*Ames*), 1997, July 2, Hardening steel.
 — W. E. (*Tissot*), 2466, Aug. 19, Furnaces or [fire-places.
 — W. E. (*Hoe*), 2561, Aug. 28, Printing machines.
 — W. E. (*Motiron*), 2603, Sep. 2, Spinning.
 — W. E. (*Spencer*), 2623, Sep. 3, Pulverizing and [separating minerals.
 — W. E. (*Farcot, Farcot, Farcot, & Chateau*), [2635, Sep. 4, Regulating speed of engines, &c.
 — W. E. (*Norrbin & Ohlsson*), 2766, Sep. 18, [Explosive compounds.
 — W. E., & Mitchell, J., 2767, Sep. 18, Carriage [springs.
 — W. E. (*Callaud*), 2936, Oct. 4, Governors.
 — W. E. (*Thompson*), 3411, Nov. 15, Stench traps, [stamps, &c.
 — W. E. (*Gloeckner*), 3668, Dec. 4, Iron and steel.
 — W. E. (*Woodbridge*), 3702, Dec. 6, Ordnance [tubes, &c.
 — W. E. (*Farcot, Farcot, Farcot, & Chateau*), [3776, Dec. 12, Governors.
 Nezeraux, P. (*Johnson*), 2054, July 8, Cooling air and [gases.
 Nichol, J. D., & Eckersley, J., 455, Feb. 13, Drying and [pressing printed paper.
 Nicholas, G., & Osborn, J., 3564, Nov. 27, Locking [railway wheels.
 Nicholls, A., 3137, Oct. 23, Hydrostatic and other instru- [ments.
 Nicholson, E. C., 3007, Oct. 11, Substances for dyeing, &c.
 — E. C., 3094, Oct. 19, Colors for dyeing, &c.
 — John, & Skinner, G., 2931, Oct. 4, Steam- [boilers.
 Nicholson, Joseph (*Lake*), 3392, Nov. 14, Reaping and [mowing.
 Nicholson, W. N., 1021, Apr. 6, Horse rakes, &c.
 — W. N., 2104, July 12, Horse-rakes, &c.
 — W. N., 3730, Dec. 9, Horse-rakes, &c.
 Nickoll, J. J., & Read, G., 2765, Sep. 18, Signalling.
 Nickson, P. H. H., 542, Feb. 20, Lining for fire-proof [safes.
 Nicoll, D., 836, Mar. 19, Waterproof fabrics, &c.
 — D., 1657, May 31, Rendering fabrics uninflam- [mable.
 Noad, J., 2610, Sep. 2, Paper-pulp from wood.
 — J., 3839, Dec. 18, Electro-types.
 Nobbe, D. A. A., 250, Jan. 25, Fire-escapes.
 Noble, G., 2006, July 3, Treating fibres for paper.
 Noddings, R., 134, Jan. 16, Ploughs.
 Noot, H. (*Müller*), 1629, May 29, Extracting nails, &c.
 Nørholm, N. (*Browne*), 749, Mar. 11, Sewing gloves.
 Norman, E., 2300, Aug. 1, Sewing-machine.
 — J., & More, J. W., 139, Jan. 17, Clipping [horses, &c.
 — W., & Leaker, A. A., & W. H., 2238, July 26, [Coffins.
 Normington, D., & Harris, J., 397, Feb. 7, Bedstead [joints, &c.
 Norminton, E. N., & Quick, C., 281, Jan. 30, Carriages.

Norrbin, J. H., & Ohlsson, J. (*Newton*), 2766, Sep. 18, [Explosive compounds.
 Norris, S., 1031, Apr. 6, Pavements.
 North, E. P., 3907, Dec. 24, Tables and reading desks.
 — T. (*Tomlinson*), 3541, Nov. 26, Railway axle-boxes.
 Northcote, G. B., 1702, June 5, Liquid level indicator [and measurer.
 Norton, F., & Larmuth, M. H., 1412, May 9, Standards [for telegraph wires.
 — J., & Hanson, R., 3613, Nov. 30, Steam-boilers.
 — J. L., 357, Feb. 3, Stables, cattle-sheds, &c.; [paving.
 — J. L., 1149, Apr. 17, Walls, ceilings and floors.
 — J. L., 1151, Apr. 17, Blocks and slabs for [building, &c.
 — J. L., 1662, June 1, Brushes, brooms, mats, &c.
 — J. L., & Carter, J. H., 1911, June 24, Decorti- [cating, &c. grain and seed.
 — J. L., 3443, Nov. 18, Drying wool, &c.; baking [bread.
 Notara, C., 439, Feb. 12, Separating grain and seeds.
 Nourick, A., & Wild, W. C., 22, Jan. 3, Heightening [colour of gems, &c.
 Nussey, G. H., 367, Feb. 5, Asphalt pavement.
 — G. H., & Leachman, W. B., 2370, Aug. 9, Pressing [fabrics.
 Nuttall, S. (*Isherwood*), 531, Feb. 19, Loom shuttles.
 — T. & W., 487, Feb. 15, Looms.
 — W. & T., 487, Feb. 15, Looms.
 Nutting, T., 1035, Apr. 8, Spinning.

O.

Oakley, F. (*Spence*), 138, Jan. 17, Railway joints.
 Oakley, J. T., & Jaques, J. A., 546, Feb. 20, Grinding, [stamps, &c. iron and steel articles.
 — J. T., & Jaques, J. A., 851, Mar. 20, Working [iron and steel articles.
 O'Callaghan, J. M. P., 3454, Nov. 19, Lowering, &c. [ships' boats.
 Oclee, F. H., 737, Mar. 11, Dentists' busts.
 Oddy, F., 3136, Oct. 23, Utilizing exhaust steam.
 Odroqonge-Wysocki, I. L. (*Clark*), 1536, May 20, Lun- [cheon cases.
 Ogilvie, C. S. (*Ogilvie*), 3593, Nov. 29, Steering ships.
 Ogilvie, L. (*Ogilvie*), 3593, Nov. 29, Steering ships.
 Ogle, G. C., 1843, June 19, Mowing and reaping.
 — G. C., 3560, Nov. 27, Agricultural implements.
 Ohlsson, J., & Norrbins, J. H. (*Newton*), 2766, Sep. 18, [Explosive compounds.
 Oldroyd, A., 864, Feb. 5, Tobacco pouches and purses.
 — J., 2359, Aug. 8, Hydraulic engines.
 — J. & M., 167, Jan. 18, Textile fabrics.
 — J. & M., & Johnson, E., 1444, May 11, Textile [fabrics.
 — M. & J., 167, Jan. 18, Textile fabrics.
 — M. & J., & Johnson, E., 1444, May 11, Textile [fabrics.
 Oliver, J. H., 3623, Dec. 2, Wooden pegs for boots & shoes.
 Ollard, J. F., & Barrow, R. K. (*Gottberger & Tappin*), [1647, May 31, Playing cards.
 Olofson, E. Beckman- (*Bonneville*), 376, Feb. 5, Drinks.
 Olson, J. W., & Thompson, J. C. (*Newton*), 1145, Apr. 17, [Distilling.
 O'Neill, J., 2062, July 8, Signalling in trains.
 Onffroy, A. H. (*Onffroy & Co.*), 2578, Aug. 30, Steam- [boilers.
 Onffroy & Co. (*Onffroy*), 2578, Aug. 30, Steam-boilers.

- Onions, J., & Beaman, S. J., 766, Mar. 14, Puddling furnaces.
 — W., & Lane, J., 2366, Aug. 8, Brewing.
 Oppenheimer, J., 1253, Apr. 26, Recording votes.
 Orchar, J. G., Muir, M. A., Mellwham, J., & Robertson, [W., 1867, June 21, Winding yarn.
 Orloski, J. (Abel), 2883, Sep. 30, Traction-engines.
 Ormerod, J., & Speirs, D., 1006, Apr. 5, Red colour.
 Orr, E., 1697, June 5, Cartridges.
 O'Ryan, D., & Brockmann, L. (Imray), 1489, May 16, [Means of transit across rivers, &c.
 Osborn, A. F. (Haseltine), 2414, Aug. 13, Holder for [scrubbing brushes, &c.
 — E. H. & Hunter, A. (Johnson), 3486, Nov. 21, [Seed separators.
 Osborn, J., & Nicholas, G., 3564, Nov. 27, Locking rail- [way wheels.
 — S., 3515, Nov. 23, Reaping and mowing.
 — S., 3929, Dec. 27, Prickers used in blasting, &c.
 Osborn, W. (Temple & Danter), 816, Mar. 18, Pipe joints.
 Osborn, W., 2764, Sep. 18, Locks.
 Osborne, D. M. (Haseltine), 537, Feb. 19, Rakes of [harvesters.
 Osgood, H., Storer, M. F., & Keys, C. G. (Newton), [576, Feb. 22, Hoists & safety hatches.
 — J. C., & Proctor, G. K. (Lake), 1677, June 3, [Sewing-machines.
 Oswald, J., Peigner, F., Menet, H., & Gally, G., 3133, [Oct. 23, Imitation ceramic ware.
 Oursel, V. C. J., Chéradame, A. L., & Zarzecki, S. J. I. [(Lake), 1667, June 1, Boot and shoe heels.
 — V. C. J., Chéradame, A. L., & Le Dreux, A. E. [(Lake), 2053, July 6, Ventilating.
 Outridge, J. E., 1217, Apr. 23, Slide-valves.
 — J. E., 3307, Nov. 7, Valves.
 Owens, G., & Unwin, E., 1839, June 18, Delivering sheets [from printing machines, &c.
 Overend, J., & Newsome, J., 2873, Sep. 30, Steam-engines.
 Overton, W., & Catlow, C., 2326, Aug. 3, Looms.
 Owen, A. S. (Teuchert), 3672, Dec. 4, Electric currents.
 — C., 886, Mar. 23, Preventing accidents in tunnels.
 — C., 2815, Sep. 24, Preventing accidents in tunnels.
 — C., 3512, Nov. 23, Communicating in trains.
 — C. M., & Langham, J. G., 3121, Oct. 22, Railways [and rolling stock.
 — E. L., & Underwood, G., 2109, July 12, Purifying gas.
 Owens, T., & Puzey, G., 3176, Oct. 26, Safety-pocket.
 Ozanne, E., 707, Mar. 7, Operating gas valves; lighting, [&c. gas.
- P.**
- Pace, E., 369, Feb. 5, Cutting splints.
 — E., & Howard, J. H., 1285, Apr. 29, Cutting splints.
 Pack, J. J. M., & Jarosson, L. (Morgan-Brown), 1710, [June 6, Dyeing.
 — J. J. M., & Elwert, J. H. (Morgan-Brown), 1880, [June 22, Extracting ammonia.
 Packard, E., 2328, Aug. 3, Superphosphate & manure.
 Page, G. G., 135, Jan. 16, Piers and breakwaters.
 — H., 3306, Nov. 7, Paper-pulp.
 — H., 3830, Dec. 17, Paper-pulp.
 Paget, A., 1219, Apr. 24, Raising, & distributing liquids.
 — F. A., & Dormoy, P. A., 2287, July 31, Furnaces.
 Paige, J. W., & Reynolds, D. (Lake), 706, Mar. 7, Type- [setting.
 Paillard, A., & Peltier, E. (Henry), 1336, May 2, Boxes.
 Palau, P. (Gedge), 3485, Nov. 21, Washing linen, &c.
 Palliser, J., McDowell, R., Klopsk, A., & Grumel, V. (Weatherdon), 3231, Oct. 31, Bleaching fabrics, &c.
 Palliser, W., 775, Mar. 14, Boots and shoes.
- Palmer, H. P. F., 1897, June 24, Packing cases for slates, &c.
 — J. E., 3379, Nov. 13, Copying, shading, &c., [photographs.
 — T., Pickup, A., & Carter, S., 2474, Aug. 20, [Sewing-machines.
 — T. N. (Errani & Anders), 1126, Apr. 16, Motive- [power.
 — T. N. (Lacruz), 2183, July 22, Catamenial belt.
 — W. O., 691, Mar. 6, Brakes for carriages.
 — W. O., 1760, June 11, Signal-lamp.
 Papier, J. B. C. A., 3521, Nov. 23, Preventing chimneys [smoking; ventilating.
 Paraire, E. L., 125, Jan. 16, Air-pumps.
 — E. L., 126, Jan. 16, Looms.
 Pardoe, James, Wilkinson, J., & Fillingham, S., 2961, [Oct. 8, Scouring, &c., yarns.
 — James, Glover, W., Wilkinson, J., & Fillingham, S., [3597, Nov. 29, Scouring, preparing, &c., yarns.
 — James, & Fillingham, S., 3669, Dec. 4, Scouring, [preparing, &c., fabrics.
 — Joseph, & Davis, B. W., 3248, Nov. 2, Printing [machines.
- Paris, J., 1146, Apr. 17, Furnaces.
 Parisod, J. M. L., & Prochasson, J. E. G. (Clark), 3849, [Dec. 18, Calendar.
 Parisot, F., & Jourdeuil, P. E. (Gedge), 2322, Aug. 3, [Cordage & woven fabrics.
 Parker, A. J., 3217, Oct. 30, Printing machines.
 Parker, C. (Hughes), 2325, Aug. 3, Dressing lithographic [stones.
 Parker, D., & Sutcliffe, J., 3027, Oct. 14, Warping, &c. [yarns.
 — E. L., 3159, Oct. 24, Fastenings for braces, &c.
 — J. F., & Wade, A., 2528, Aug. 26, Hydrocarbon gas.
 — T., 57, Jan. 6, Heating.
 Parker, W. F. (Hughes), 180, Jan. 19, Locks of fire-arms.
 Parker, W. M., & Robson, J. R., 1947, June 27, Steam [engines & pumps.
 Parker-Rhodes, C. E., 309, Jan. 31, Boots, shoes, &c.
 Parkin, C., 3023, Oct. 14, Signalling.
 Parkins, J., 3699, Dec. 6, Matchbox.
 Parks, J., 1366, May 4, Salt-pans and furnaces.
 — J., 3260, Nov. 2, Salt-pans and furnaces.
 Parlin, C. E., & Turner, J. O. (Ryerson), 3295, Nov. 6, [Boot heel.
 Parlour, J. T., 2014, July 3, Asphalt & other pavements.
 Parnacott, E. J. W., 3292, Nov. 6, Artificial fuel.
 Parry, J., 239, Jan. 24, Furniture castors.
 Parsons, P. M., 878, Mar. 22, Ordnance, carriages, and [projectiles.
 Partington, E., 2233, July 26, Utilizing products of com- [bustion for producing motive power.
 — J., & Riley, D., 3165, Oct. 25, Steam-boilers.
 Pashley, G., 819, Mar. 19, Valves.
 Passmore, E. G. (Lake), 538, Feb. 19, Lawn-mowers.
 Paterson, R., & Hamilton, J., 3061, Oct. 17, Soldering bolts.
 — R., & Hamilton, J., 3078, Oct. 18, Aërating & [transferring liquids.
 — W., & Sanderson, W. A. R. & J., 2153, July 18, [Treating wool.
 Pathier, T. H. (Spence), 1852, June 19, Currying leather.
 Patrick, A. M. (Clark), 902, Mar. 25, Elevators for fire- [men, &c.
 Patrick, W. B., 3946, Dec. 28, Filtering sugar.
 Patterson, C. G., & Rouse, J. L. (Newton), 3044, Oct. 15, [Trusses.
 Patterson, R. H., 730, Mar. 9, Purification of coal gas.
 Paul, A., & Jordan, J., 3784, Dec. 13, Safety-valves.
 — M., & Haythorn, J., 1939, June 27, Steering appa- [ratus.
 Pauville, A. N., & Roswag, C. (Johnson), 313, Jan. 31, [Separating gold and silver from lead.

- Payen, E. Thomas-, & Roux, H. (Bonneville), 1046, [Apr. 9, Treating metal or ores.
Payne, C. H. & M., 788, Mar. 15, Brick-making.
— E. J., & Clarke, W., 2943, Oct. 5, Iron & steel.
— M. & C. H., 788, Mar. 15, Brick-making.
— R. (Read), 2164, July 19, Indicating temperature [in vessels, rooms, &c.
— S. J., 2015, July 3, Fire-bricks, crucibles, &c.
Payton, W., 3187, Oct. 26, Adjusting & raising stone [blocks, &c.
Peach, J., & Gray, W., 3072, Oct. 17, Bird & animal traps.
Peake, B., 2658, Sep. 7, Fabric for dresses & trimmings.
Pearsall, H. D. (Pearsall), 49, Jan. 5, Treating fibres.
Pearsall, J. S. (Pearsall), 49, Jan. 5, Treating fibres.
Pearson, M., & Mills, D., 2796, Sep. 21, Looms.
Peattie, D., 2042, July 6, Window-blinds or shades.
Peebles, J., 3108, Oct. 22, Vessel for supplying, &c., gas.
— W. (Steiner), 946, Mar. 30, Steam-engines.
Peel, W., & Dodd, J., 3877, Dec. 21, Reaping & mowing.
Peigner, F., Menet, H., Gally, G., & Oswald, J., 3133, [Oct. 23, Imitation ceramic ware.
Peile, S., 1763, June 11, Mowing and reaping.
— S., 3633, Dec. 3, Horse-rakes.
Peillon, C. G. A. (Johnson), 1383, May 6, Treating coal; [artificial fuel.
Pelhuche, A. (Gedge), 1984, July 1, Phosphorus.
Pellatt, W. C., 2631, Sep. 4, Securing railway doors.
Pelly, A. C. (Von Horn), 3330, Nov. 9, Peat fuel.
Peltier, E., & Paillard, A. (Henry), 1336, May 2, Boxes.
Pembery, J. G., 988, Apr. 4, Propelling boats.
Penn, T., 3871, Dec. 20, Cocks, &c.; releaser for pile [drivers.
Pennell, H. C., 54, Jan. 6, Skates.
Peple, A. (Haseltine), 3958, Dec. 30, Breaking rags.
Pepper, T., 597, Feb. 24, Washing machines.
Percival, W. H., 1318, May 1, Camp bedsteads.
Percy, W. C. S., 2082, July 10, Awning for omnibuses, &c.
Perkins, J. W., 642, Mar. 1, Phosphates of lime or alumina.
— J. W., 2997, Oct. 11, Artificial fuel.
— L., 3845, Dec. 18, Packing rings for pistons, &c.
— L., & Fairlie, R. F., 2616, Sep. 3, Locomotive [engines.
— T., 3169, Oct. 25, Straw elevators.
— T., Faux, E., & Campain, S. W., 728, Mar. 9, [Cultivating land.
— W. J., 1389, May 7, Pneumatic bracket for sup- [porting music, &c.
Pernot, F. (Vaughan), 2046, July 6, Utilizing waste [furnace gases.
Perrellon, P. M. (Ray), 1803, June 15, Valve for barrels.
Perron, F., & Bonnardot, A., 2871, Sep. 30, Boots & gaiters.
Perrot, P. (Dufrené), 2234, July 26, Carriages, &c.
Perry, A., 1821, June 17, Drying and roasting malt, &c.
— G., 3216, Oct. 30, Presses for moulding glass, &c.
— H., 688, Mar. 6, Bottles.
Pétitjean, T., 3680, Dec. 5, Producing metallic surfaces [and articles by electro deposition, &c.
Petit-Toulouse, E. O. (Gedge), 1737, June 8, Looms.
Petot, P. J., & Salmon, N. (Harmond), 622, Feb. 28, [Awning for vehicles, &c.
Petric, J., 307, Jan. 31, Washing and drying fibres.
Pétry, A. (Keene), 1534, May 20, Teaching numeration.
Petvini, R., & Bellotti, S. (Henry), 2794, Sep. 20, Propel- [ling ships.
Peyton, E., 1209, Apr. 23, Spring-mattresses, &c.
Pfeiffer, F. (Huppe & Bender), 3482, Nov. 21, Lock for [bags, &c.
Phelps, G. M., 3936, Dec. 27, Printing telegraphs.
Phillips, J., Kiestling, L., & Bergehausen, B. (Eagles), [1263, Apr. 27, Heating rooms, carriages, &c.
Philips, R., & Grierson, J. S., 3494, Nov. 22, Applying [bronze, &c. upon paper.
Phillips, H., 811, Mar. 18, Dry-closets.
— J., 384, Feb. 6, Ships' signal-lamps.
— J. E., Innocent, J., & Hornsby, R., 2364, Aug. 8, [Reaping and mowing.
— J. E., Innocent, J., & Hornsby, R., 3289, Nov. 6, [Reaping and mowing.
— S. E., & Whitehouse, E. O. W., 3016, Oct. 12, [Recording fares in public vehicles.
— T. H., 1956, June 28, Heating, cooking & lighting.
— W., 1906, June 24, Pea range and forcing frame.
— W. H., 2221, July 25, Cooling liquids.
Phillipson, H. E., 1855, June 20, Palliass.
Philpott, J., 2703, Sep. 12, Adhesive liquid.
Piau, J. B. (Gedge), 953, Mar. 30, Meters; motive-power.
Picard, B. (Murdoch), 3350, Nov. 11, Tanning.
Piccard, P. (Johnson), 2280, July 30, Water-meters.
Pichery, J. L., 1523, May 18, Safety-locks.
Pickard, I., 884, Mar. 23, Transmitting motion.
Picken, J., 1772, June 12, Scotch bonnets or caps.
Pickering, J., 2381, Aug. 9, Spring-mattresses, &c.
— J. R., & Boddy, J. H., 3618, Dec. 2, Propelling [vessels.
Pickin, G., 2826, Sep. 25, Lamp chimneys.
Picking, G. G., & Hopkins, W., 3236, Nov. 1, Steam [cylinders.
Pickles, J., 1196, Apr. 22, Puddling iron.
Pickup, A., Carter, S., & Palmer, T., 2474, Aug. 20, [Sewing-machines.
— J., 1617, May 28, Grate-bars.
— J., 3621, Dec. 2, Grate-bars.
Picot, J., 3677, Dec. 5, Spring-mattresses.
Pidding, W., 666, Mar. 4, Sowing seed.
— W., 3894, Dec. 23, Matches and boxes.
Piddington, J. (Francotte), 1324, May 2, Fire-arms.
— J. (Tackels), 2662, Sep. 7, Revolving fire- [arms.
Pidgeon, D., & Manwaring, W., 629, Feb. 28, Reaping [machines.
— D., & Manwaring, W., 1623, May 29, Reaping [machines.
— D., & Manwaring, W., 3030, Oct. 15, Reaping [machines.
Piedbœuf, G., 295, Jan. 31, Steam-boilers.
Pieper, C., 67, Jan. 9, Towing, hauling and hoisting.
— C., 153, Jan. 18, Towing and hauling vessels.
Piers, Sir E. F., & Armitage, J. S., 2856, Sep. 27, Fire-arms.
Pigall, F., 3551, Nov. 26, Scissors.
Pigott, G., 2844, Sep. 26, Wringing and mangling.
— G. W. R., 286, Jan. 30, Covered wire.
Pillet, J. (Henderson), 1842, June 19, Stereoscopes.
Pilling, A., 1026, Apr. 6, Ventilating mines.
Pin, J. B. M. E. Barre-, & R. M. J. B. H. H. Barre- [(Newton), 37, Jan. 4, Preserving substances.
— R. M. J. B. H. H. Barre-, & J. B. M. E. Barre- [(Newton), 37, Jan. 4, Preserving substances.
Pinches, J., 2409, Aug. 13, Embossing, perforating, &c.
Pinel, M. P. A., & Lecœur, E. J. J. (Henry), 2500, [Aug. 22, Preparing fibres.
Pink, R. (Ireland & Ireland), 429, Feb. 10, Steel ingots.
Pinker, J., & Ley, W., 1401, May 8, Engine packing.
— J., & Ley, W., 2609, Sep. 2, Fastener for sacks, [bags, &c.
Pinkerton, J., 3358, Nov. 12, Railway signalling.
Piper, J., & Saunders, J., 2920, Oct. 3, Tin & terne plates.
Pistor, A., & Ciacher, D. (Hughes), 2422, Aug. 14, Cigars.
Planque, J. E., & Valleton, J. H., 2783, Sep. 19, Bread, [biscuits and pastry.
Platt, B., 969, Apr. 2, Purifying turpentine, &c.
Platt, J. H., & Chase, F. T. (Lake), 961, Apr. 1, Pre- [paring fibres for spinning.
Platt, S., 2448, Aug. 16, Mules & twiners for spinning, &c.
— W. H., 3748, Dec. 10, Shuttles.

- Player, J. H., 3501, Nov. 22, Phosphorus and metallic compounds.
 — W. D., 1372, May 6, Buttons.
 Plessner, J. M., 2525, Aug. 26, Motive-power.
 Plimsoll, H. D., 1400, May 7, Miners' safety-lamps.
 — H. D., 3274, Nov. 4, Miners' safety-lamps.
 — H. D., 3281, Nov. 5, Miners' safety-lamps.
 Plush, E. T., Croll, S., & Barrett, R. T. (Lake), 909, [Mar. 25, Bearings for journals.
 Poeh, J. P. R., 656, Mar. 2, Blasting compound.
 Pochet, L., & Lemoine, L., 1232, Apr. 24, Removing smoke, &c. from railway tunnels.
 Pocock, A. W., 451, Feb. 13, Window-sash fasteners.
 Pode, J. S., 3430, Nov. 18, Feeding bottles.
 Poggi, P. (Solari), 1928, June 26, Motive-power.
 Pohl, O. E., 3116, Oct. 22, Salt.
 Pollard, J. W., Schofield, J., & Butel, A., 2630, Sep. 4, [Treating oxides of iron.
 Pollock, J., 1755, June 11, Envelopes & postal wrappers.
 Pollock, J. B. (Clark), 1934, June 26, Feeding and drying [white lead, &c.
 Pollock, J. F. M., & Mitchell, J., 1200, Apr. 22, Kilns.
 Pensard Metallurgical Society, (Johnson), 424, Feb. 10, [Furnaces for zinc ores.
 — (Johnson), 426, Feb. 10, [Treating zinc ores, &c.
 — (Johnson), 1018, Apr. 5, [Heating.
 — (Johnson), 1409, May 8, [Treating ores.
 — (Johnson), 2480, Aug. 21, [Supplying hot blast to furnaces.
 Pontifex, E. A., & Barton, J., 3033, Oct. 15, Water-waste [preventers.
 Poole, H., & Henson, W. F., 1424, May 10, Textile fabrics.
 Pooley, W. O., & McDine, J., 3011, Oct. 12, Cleaning, [&c. fibres.
 Pope, F. L. (Lake), 2461, Aug. 19, Electro-magnetic [signalling.
 Poron, A. & C. (Smith), 204, Jan. 22, Knitting machines.
 — C. & A. (Smith), 204, Jan. 22, Knitting machines.
 Porritt, W. J., 1107, Apr. 13, Woollen cloth for throistles.
 Porteous, A. N., & Bruce, G. C., 1645, May 30, Lamps.
 Porter, F. & R., 1494, May 16, Distilling.
 — J. T. B., 1820, June 17, Spade or digging machine.
 — J. T. B., 2800, Sep. 21, Ship's gas apparatus.
 — Richard, 3550, Nov. 26, Brake for wheeled vehicles.
 — Robert, & F., 1494, May 16, Distilling.
 — Robert, & Lane, T., 588, Feb. 23, Gas; furnaces.
 Post, H. A. V. (Bousfield), 1422, May 10, Puddling and [melting iron.
 — J. H. (Mills), 3318, Nov. 8, Cleansing cotton [waste, &c.
 Potts, T., & Beswick, J., 66, Jan. 8, Tilting barrels, &c.
 Pouilly, Brunet, Magnier & Co., & Prévost, G. (Johnson), [3196, Oct. 28, Spinning fibres.
 Poulson, E., 1548, May 21, Sailing boats, &c.
 Powers, E., 653, Mar. 2, Iron and other metals.
 Powis, C., 1256, Apr. 26, Umbrella and parasol slides.
 Powles, R., 3087, Oct. 18, Box for sending articles by post.
 Poynter, J. E., & Cobley, T., 3194, Oct. 28, Caustic baryta.
 Prada, N., & Toninetti, P., 835, Mar. 19, Preserving [substances.
 Prall, W. E., 3410, Nov. 15, Supplying locomotives with [water.
 Prall, W. E. (Burr), 253, Jan. 25, Diaphragm motors.
 Prange, F. G., & Whitbread, W., 379, Feb. 6, Treating [sewerage.
 Pratt, F. A. (Towle), 2305, Aug. 1, Turning screw- [bolts, &c.
 — N. A., & Lewis, G. T. (Lake), 1257, Apr. 26, [Extracting phosphoric acid, &c.
 Prendergast, C. O' L. L., 2502, Aug. 22, Signalling in trains.
 — C. O' L. L., 3480, Nov. 21, Communicating [in trains.
 — C. O' L. L., 3495, Nov. 22, Bankers' cheques.
 Prestige, J. T. & W. A., & Preston, F. P. & E. J., 1438, [May 11, Regulating water-supply.
 — W. A. & J. T., & Preston, F. P. & E. J., 1438, [May 11, Regulating water-supply.
 Preston, E. J. & F. P., & Prestige, J. T. & W. A., 1438, [May 11, Regulating water-supply.
 — F., 3010, Oct. 12, Steam-boilers and furnaces.
 — F. P. & E. J., & Prestige, J. T. & W. A., 1438, [May 11, Regulating water-supply.
 Prévost, G., & Magnier, Pouilly, Brunet & Co. (Johnson), [3196, Oct. 28, Spinning fibres.
 Price, A. P., 3095, Oct. 19, Substances for dyeing, &c.
 — A. P. (Hasenclever), 3370, Nov. 12, Annealing wire.
 — G., 91, Jan. 11, Muffs.
 — G. B., & Trotman, F., 2611, Sep. 3, Closing, &c. [bottles.
 — J., & Wilkins, J., 2877, Sep. 30, Drawing wire.
 — T., & Saniscovsky, A. L., 3517, Nov. 23, Tin and [terne plates.
 — W., & Newton, J., 2402, Aug. 12, Consuming [smoke & saving fuel.
 Pridaux, T. S., 3898, Dec. 24, Regulating air-supply to [furnaces.
 Pridmore, J., & Turner, W., 2905, Oct. 2, Carding engines.
 Priestland, C., & Harrison, F. A., 1127, Apr. 16, Attach- [ing knobs, &c. to spindles.
 Prieu, H. (Bndenberg), 235, Jan. 24, Refining sugar.
 Prince, A. (Bauer & Hiess), 1282, Apr. 29, Tobacco [pipes and cigar tubes.
 — A. (Von Sparre), 2059, July 8, Boring instrument.
 — A. (Hicks), 3268, Nov. 4, Steam-boilers.
 — A. (Fischer), 3331, Nov. 9, Feeding steam-boilers.
 — A. (Schlamp), 3332, Nov. 9, Raising water.
 — A. (Andreae), 3824, Dec. 17, Gas-burners.
 — A. (Barthel, Capitaine & Holzmann), 3886, [Dec. 21, Asphalt for paving.
 — P., 1259, Apr. 27, Regulator for variations of [signal wires.
 — T. T., & Blakemore, R., 928, Mar. 27, Horse- [shoes and nails.
 Pringle, A., 2294, July 31, Treating flax, &c.
 Printz, G. (Kayser), 466, Feb. 14, Stamping needles.
 Pritchard, L. W., 1234, Apr. 25, Valves.
 Probert, E., 2398, Aug. 12, Wood and asphalt roads, &c.
 Prochasson, J. E. G., & Parisod, J. M. L. (Clark), 3849, [Dec. 18, Calendar.
 Procopé, M. (Gilbee), 3051, Oct. 16, Harmoniums, &c.
 Procter, G. H., 2697, Sep. 11, Spring-hammer.
 Proctor, A., & Sanderson, S., 3161, Oct. 25, Steam- [boilers and furnaces.
 Proctor, G. K., & Osgood, J. C. (Lake), 1677, June 3, [Sewing-machines, &c.
 Proctor, J., & Morrell, J. C., 3888, Dec. 23, Privies and [closets.
 Proell, W. R. (Abel), 155, Jan. 18, Governors.
 Prosser, W., 1973, June 29, Spreading nozzles.
 Protheroe, F. R. H., 2619, Sep. 3, Paper.
 Provost, L. L. H., Blanchard, L. H., & Bang, I. (Clark), [388, Feb. 6, Treating sewage, &c.
 Prudencio, F., & Cotterell, J. F., 975, Apr. 3, Stopping [bottles.
 Pugin, E. W., 1092, Apr. 12, Printing advertisements.
 Pullar, J., 2242, July 27, Raising sunken ships.
 Pullen, J. & J., 2163, July 19, Casting lead D traps.
 Pullin, T. J., & Burrell, C., 3713, Dec. 7, Carts.
 Pulvermacher, I. L., 809, Mar. 18, Medico-electricity, &c.
 — I. L., 2771, Sep. 18, Medico-electricity, &c.
 Punshon, R., 347, Feb. 3, Measuring and registering liquids.

Punshon, R., 3374, Nov. 18, Fuel shovels.
 Purkis, R. A., 1935, June 26, Cooling liquids.
 — R. A., & Lessware, J. N., 2574, Aug. 29, Safety-labels.
 Purvis, G. (Johnson), 3171, Oct. 25, Ginning cotton.
 Puzey, G., & Owens, T., 3176, Oct. 26, Safety-pocket.
 Pye-Smith, A., & Ribbans, C., 831, Mar. 19, Heat non-
 [conducting compositions].
 Pyne, P., & Maurice, S. (Franklin), 332, Feb. 2, Capsules.

Q.

Quadling, E., & May, W., 3559, Nov. 27, Metal tubes.
 Quaritus, C. C. (Clark), 780, Mar. 14, Lowering and
 [detaching boats].
 Quelch, W. B., 1668, June 3, Communicating in trains.
 Quick, C., & Norminton, E. N., 281, Jan. 30, Carriages.
 — J. & J., & Cooper, A., 593, Feb. 23, Signal-lamps.
 Quin, J., 8932, Dec. 27, Belting for machinery.
 — J., 8933, Dec. 27, India-rubber tubing.
 Quinn, A. (Clark), 701, Mar. 7, Horse-shoes.

R.

Rabien, H., & Wellinghoff, M. (Clark), 1913, June 24,
 [Rudder and drag for vessels].
 Rabone, J. (Kenyon), 1989, July 2, Spirit levels.
 Racey, G., & Young, J., 498, Feb. 16, Fire escapes, drop
 [curtains, &c.].
 Rack, A., 2675, Sep. 9, Copying presses.
 Radcliffe, R. H., 2526, Aug. 26, Screw-propellers.
 Radde, W. (Lake), 121, Jan. 15, Pipes and pipe joints.
 Radelet-Laurent, J. B. & Son (Gedge), 1480, May 15,
 [Vertical hammers].
 Radford, J., 3905, Dec. 24, Steam taps, &c.
 Rae, M., 1745, June 10, Fuel.
 — M., 3308, Nov. 7, Artificial fuel.
 Ragon, A. E. (Alexandre), 1181, Apr. 20, Case for
 [railway tickets, &c.].
 — A. E., & Walker, J., 1288, Apr. 30, Fireproof
 [buildings, bridges, &c.].
 Raimbault, J. C. (Gedge), 492, Feb. 16, Cleaning metals.
 Rainbow, W. (Walker), 2216, July 25, Railway signals.
 Ramsay, C. T., & Smyth, A., 2752, Sep. 17, Drying
 [fibres and grain, &c.].
 — D. R., & Briggs, H. C., 1184, Apr. 20, Steam gene-
 [rator, &c. for puddling furnaces].
 Ramsdell, W. H., & Crane, J. E. (Lake), 1361, May 4,
 [Knitting].
 Ramsden, B., 1172, Apr. 19, Steam-boilers.
 — J. C., 2650, Sep. 6, Combustion of fuel;
 [utilizing gases].
 — J. C., 3520, Nov. 23, Severing double piled fabrics.
 — J. C., & Tankard, J. M., 3616, Nov. 30, Staining
 [velvets, &c.].
 — J. C., & Tankard, J. M., 3620, Dec. 2, Staining
 [fibres].
 Ramsten, H., 2852, Sep. 27, Laying out courses, &c.
 [upon charts].
 Rand, A. C., 2748, Sep. 16, Compressing air.
 Rand, A. C., & Waring, J. B. (Johnson), 3125, Oct. 23,
 [Rock boring or drilling].
 Randall, C. A., & Foote, T. M., 3368, Nov. 12, Tele-
 [graphic printing].
 Randall, R. B., Andrews, E. R., & Clague, W. R. (Lake),
 [855, Mar. 21, Attaching covers to pamphlets].
 Randolph, C., & Harvey, C. R., 2407, Aug. 13, Tramway cars.
 Ransome, A., 2894, Oct. 1, Sand papering machines.
 — A. (Richards), 1501, May 16, Wood cutting
 [machines].
 — A. (Richards), 2674, Sep. 9, Mortising machines.
 Ransome, E. L., & Ransome, F., 877, Mar. 22, Artificial
 [stone].
 Ransome, F., & Ransome, E. L., 877, Mar. 22, Artificial
 [stone].
 — J. E., 1507, May 17, Ploughs.
 Ratcliff, D. R., 2914, Oct. 3, Preventing explosion of
 [gunpowder].
 Rath, W., 2805, Sep. 23, Removing oxide from iron & steel.
 Rault, L., & Chassan, E., 304, Jan. 31, Printing telegraphs.
 Rave, C., 3270, Nov. 4, Extracting coloring matter.
 Rawcliffe, J., Bibby, W., & Fleming, A., 841, Mar. 20,
 [Spinning mules].
 Rawson, C., & Sillar, W. C. & R. G., 575, Feb. 22, Treat-
 [ing and deodorising excreta].
 — C., & Sillar, W. C. & R. G., 1806, June 15, Manure.
 — H., 1959, June 28, Looms.
 Ray, A. (Duchamp), 1439, May 11, Telegraphic signalling.
 — A. (Perrellon), 1803, June 15, Valves for barrels.
 — A. (Jean), 2178, July 20, Motive-power.
 Rayer, W. A., & Lincoln, W. S. (Lake), 2831, Sep. 25,
 [Sewing-machines].
 Raymond, C., 1660, June 1, Sewing-machines.
 Raynor, S. (Lake), 977, Apr. 3, Gas-burners.
 Ré, J. (Vezzoli), 3403, Nov. 15, Horse-shoes.
 Read, G., & Nickoll, J. J., 2765, Sep. 18, Signalling.
 Read, J. A. (Payne), 2164, July 19, Indicating temper-
 [ature in vessels, rooms, &c.].
 Read, W. T., 3372, Nov. 13, Bottling cocks or taps.
 Readett, J. R., 2346, Aug. 7, Expressing oil from seeds, &c.
 Rebour, C. J. N. (Hunt), 1711, June 6, Motive-power
 [machines].
 Reckendorfer, J. (Johnson), 578, Feb. 22, Stamped lead
 [pencils, &c.].
 Redihalg, G., & Mann, W. C., 3002, Oct. 11, Hats.
 Redmayne, T., 1894, June 22, Desks, seats, & music stands.
 — T., 3706, Dec. 7, Desks, seats, & music stands.
 Reed, S. C., 1066, Apr. 11, Portable stretchers & bedsteads.
 Reeves, H., 1010, Apr. 5, Elevators for stacking hay, &c.
 — H. A. W., 3100, Oct. 21, House or slop pails.
 Reilly, J., 615, Feb. 26, Communicating in railway trains.
 — J., 918, Mar. 26, Preventing accidents on railways.
 Reilly, J. (Clark), 3856, Dec. 19, Ventilating ships.
 Reimann, J. (Newton), 216, Jan. 23, Regulating warp
 [tension in looms].
 Remington, G., & Croskey, J. R., 1081, Apr. 12, Railway rails.
 Renard, P. V. (Barlow), 1613, May 28, Washing, dye-
 [ing, &c. fibrous materials, &c.].
 Renaux, F. V. (Johnson), 2624, Sep. 4, Water-closets.
 Rendall, J. & W., 3805, Dec. 16, Slop carts for sewage, &c.
 — W. & J., 3805, Dec. 16, Slop carts for sewage, &c.
 Rendel, G. W., 3826, Dec. 17, Working heavy guns.
 Render, F., 1067, Apr. 11, Riding and driving reins.
 — F., 2960, Oct. 8, Dressing flour.
 Rendle, W. E., 569, Feb. 22, Greenhouses; watering plants.
 Renoz, F. (Gray), 1215, Apr. 23, Composition for
 [paint, &c.].
 Renshaw, G. P., 2231, July 26, Railway brakes & signals.
 — W. R., 1123, Apr. 16, Puddling iron.
 Reynolds, A. J. (Clark), 1746, June 10, Steam-pumps.
 Reynolds, A. J., 2696, Sep. 11, Steam pumping engines.
 — A. J., 3264, Nov. 4, Submerged force pumps.
 Reynolds, D., & Paige, J. W. (Lake), 706, Mar. 7, Type-
 [setting].
 Reynolds, F., 2598, Sep. 2, Springing boards and parallel
 [bars].
 — J., 1001, Apr. 5, Roving or slubbing frames, &c.
 — W. F., 2820, Sep. 24, Ships' compasses.

- Reynolds, W. M. (Hunt), 2207, July 24, Dentistry.
 Rhodes, C. E. Parker-, 309, Jan. 31, Boots, shoes, &c.
 Ribbans, C., & Pye-Smith, A., 831, Mar. 19, Heat non-conducting compositions.
 Riboulet, G. A. M., & Morel, H. L., 3098, Oct. 19, [Velvets, &c.]
 Rice, D. H. (Lake), 2933, Oct. 4, Spindles for spinning [machines].
 — G. S., & Crossman, J. M. (Duggin), 3326, Nov. 9, [Securing window-sashes].
 Rice, J., 520, Feb. 17, Fire-grates, stoves and furnaces.
 — J., 861, Mar. 21, Propelling vessels.
 Rich, S. W., 547, Feb. 20, Treating schist, &c.
 — S. W., 1243, Apr. 25, Sulphates.
 Richard, J. S., 1271, Apr. 27, Warping or beaming [machines, &c.]
 Richards, B., 922, Mar. 26, Walking-sticks.
 — J. (Holman), 3297, Nov. 6, Marking instruments.
 — J., Lawrence, G., & Lingard, J. W., 1333, [May 2, Bouquet holders].
 Richards, J. (Ransome), 1501, May 16, Wood cutting [machines].
 — J. (Ransome), 2674, Sep. 9, Mortising machines.
 Richards, W., 3195, Oct. 28, Fire-arms and cartridges.
 Richardson, C., 1488, May 16, Looms.
 — C., 2309, Aug. 2, Looms.
 Richardson, F., & Hacker, F. (Lake), 786, Mar. 14, Boot [and shoe heels].
 — F., Hacker, F., & Blake, J. A. (Lake), [1175, Apr. 19, Filling metallic boot heel shells].
 Richardson, James C., & Sorby, S., 1150, Apr. 17, [Ploughs].
 — John, 2167, July 19, Controlling slide-valves [of engines].
 — John W. & T., & Spencer, A., 2337, Aug. 6, [Puddling furnaces, &c.]
 — John W. & T., & Spencer, A., 3609, Nov. 30, [Refining iron and steel].
 — Joseph, 2399, Aug. 12, Dyeing fabrics.
 — T. & J. W., & Spencer, A., 2337, Aug. 6, [Puddling furnaces, &c.]
 — T. & J. W., & Spencer, A., 3609, Nov. 30, [Refining iron and steel].
 — W., 456, Feb. 13, Treating fibres.
 — W., 3369, Nov. 12, Cleaning, opening, &c. [fibres].
 — W., & Fidler, J., 1230, Apr. 24, Cotton-gins.
 Riches, R. R., 2980, Oct. 10, Revolving rakes.
 Richter, W., 2023, July 4, Breaking bar iron.
 Rickard, W. (Dann), 2559, Aug. 28, Washing, &c., ores [of precious metals].
 Ricketts, J., 1556, May 22, Stationery cases, &c.
 — J., & Lutschauig, A., 1907, June 24, Defacing [postage stamps].
 Riddell, J. (Allan), 1475, May 15, Reflectors.
 Riddell, W., 1690, June 4, Paper-pulp; chloride of lime.
 Ridpath, T. A., & Sherring, W. A., 3167, Oct. 25, Magneto-electric power for signalling, &c.
 Ridsdale, J., 1524, May 18, Frames for ships' lights, &c.
 — J., 1620, May 29, Signalling.
 — J., 2420, Aug. 14, Lamps.
 Rieber, J., 1813, June 15, Propelling vehicles.
 — J., 2249, July 27, Brake for omnibuses, &c.
 Rigg, A., 3811, Dec. 16, Speed or power regulators.
 Rigod, J. F. M., 983, Apr. 3, Carburetting air.
 Rigollot, F., 3063, Oct. 17, Sluice valves and cocks.
 Riley, D., & Partington, J., 3165, Oct. 25, Steam-boilers.
 — E., and Bracewell, J. & W., 185, Jan. 20, Distributing manure.
 — J., 3453, Nov. 19, Roofs, &c. of buildings.
 Riley, R. (Hunt), 2761, Sep. 18, Producing ice.
 Riley, W. S., 1825, June 17, Fire-arms and cartridges.
- Riondey, F. (Dufrené), 1328, May 2, Watches.
 Ripamonti, D. & L. (Vaughan), 3360, Nov. 12, Mariner's [compass].
 — L. & D. (Vaughan), 3360, Nov. 12, Mariner's [compass].
 Ripley, H. W., (Depouilly), 283, Jan. 30, Coloring fabrics.
 Rippin, E. C., 941, Mar. 30, Steering, hoisting, &c.
 — E. C. & G. H., 2775, Sep. 19, Preparing, &c. [fibres].
 — G. H. & E. C., 2775, Sep. 19, Preparing, &c. [fibres].
 Rippingille, E. A., 2604, Sep. 2, Oil lamps.
 Ritchel, C. F., & Allen, F. S. (Clark), 3388, Nov. 13, [Bolts and nuts].
 — C. F., & Allen, F. S. (Clark), 3399, Nov. 14, [Boring and drilling].
 Ritchie, F. J., 2078, July 10, Sympathetic clocks.
 — P., & Wylie, A., 3009, Oct. 12, Scotch bonnets, &c.
 Rives, J. M. E. A. (Gedge), 2324, Aug. 3, Portable [pump].
 Robbe, G. (Brunet), 2941, Oct. 5, Curing cattle disease.
 Robbins, Z. C. (Lake), 133, Jan. 16, Horse-collars.
 Robert, J. (Ducros), 1621, May 29, Tricycles, &c.
 Robertson, G., & Simonett, I., 2038, July 5, Cleansing [woven fabrics].
 Roberts, J., 696, Mar. 7, Tramways.
 Roberts, J. M. (Lake), 3678, Dec. 5, Iron and steel; [furnaces].
 Roberts, M. J., 3280, Nov. 5, Packing for stuffing boxes, &c.
 — M. J., 3403, Nov. 15, Engine governors.
 — M. J., 3773, Dec. 12, Safety-valve.
 — W., 623, Feb. 28, Painting laths for blinds, &c.
 Robertshaw, J., & Burgess, F., 3582, Nov. 28, Spinning [and twisting fibres].
 Robertson, D., 3665, Dec. 4, Stuffing boxes.
 — James, 1675, June 3, Imparting motion to, [and transmitting motion from liquids].
 — James, 3134, Oct. 23, Motive-power engines.
 — John, 2586, Aug. 30, Generating heat.
 Robertson, John (Robertson), 1982, July 1, Oscillating [engine, fluid motor or pump].
 Robertson, John B., 2136, July 17, Steam-traps.
 — John S., 3837, Dec. 18, Horse-shoes.
 — Joseph B., 942, Mar. 30, Sewing machinery.
 — R. A., 790, Mar. 15, Evaporating liquids.
 — W. (Robertson), 1982, July 1, Oscillating [engine, fluid motor or pump].
 — W., Orchar, J. G., Muir, M. A., & McIlwham, [J., 1867, June 21, Winding yarn].
 Robey, J., 435, Feb. 10, Substitute for animal charcoal.
 — J., 1421, May 10, Filtering, disinfecting, and [deodorising sewage, &c.]
 — J., 2181, July 20, Substitute for animal charcoal.
 Robin, T., & Malo, A. A. L. (Johnson), 610, Feb. 26, [Asphalt roads].
 Robins, W. B., 1154, Apr. 18, Hand pumps or syringes.
 Robinson, A. H., 2663, Sep. 9, Indicating and registering [fares, &c.]
 — F. C. B., 991, Apr. 4, Lowering ships' boats.
 — H., 2165, July 19, Railway waggons.
 — J., & Smith, J., 3858, Dec. 19, Shaping cask [staves].
 — J. T., & Tully, T. D., 3467, Nov. 20, Gas & [water pipes; extinguishing fire].
 — T., & Edwards, R., 475, Feb. 15, Puddling &c. [furnaces].
 — T., & Hargreaves, J., 508, Feb. 17, Chlorine [and hydro-chloric acid].
 — T., & Hargreaves, J., 509, Feb. 17, Alkalies.
 — T., & Hargreaves, J., 2573, Aug. 29, Hydro-chloric acid.
 — T., & Hargreaves, J., 2596, Aug. 31, Salt.

Robinson, T., & Hargreaves, J., 2704, Sep. 12, Sulphate
[of soda.
—— T., & Hargreaves, J., 2982, Oct. 10, Alkalies.
—— T., & Hargreaves, J., 3032, Oct. 15, Treating
[sulphides.
—— T., & Hargreaves, J., 3052, Oct. 16, Sulphates
[of soda and potassa.
Robison, K., 2632, Sep. 4, Umbrellas.
—— K., 2755, Sep. 17, Ladies' fans.
—— K., 3083, Oct. 18, Muff warmer.
Robson, A., 86, Jan. 11, Straining, &c. fencing and tele-
[graph wires.
—— H. R., 947, Mar. 30, Bearings for shafts, &c.
—— J., Hudson, T., & Walker, W., 2348, Aug. 7,
[Sheathing for ships.
—— J. R., & Parker, W. M., 1947, June 27, Steam
[engines and pumps.
—— T. M., 2470, Aug. 19, Cutting cardboard, &c.
Roche, H. A. (Murdoch), 3647, Dec. 3, Pipe or tube
[joints.
—— I. J., & Bazault, F. G. (Brewer), 1466, May 14,
[Steel, &c.
Rodden, W. H., 3568, Nov. 27, Pitch-forks.
Roekner, C. H. & Lunge, G., 463, Feb. 14, Papermakers'
[boilers, &c.
Rogers, H. J. (Henry), 2987, Oct. 10, Sustaining and
[insulating telegraph wires.
Rogers, J., 3090, Oct. 19, Constructing roads.
—— J. E., 1573, May 23, Differential screw motion.
—— S. A., 2612, Sep. 3, Stamping letters, &c.
Rogers, W., & Burchfield, T. J. (Lake), 1574, May 23,
[Sheet-iron.
Rogers, W. C., 1967, June 29, Gas-regulators.
Rollason, W., & Brough, N., 172, Jan. 19, Boxes for
[matches, &c.
Rolls, J. G., 1786, June 13, Material for electric insu-
[lators, &c.
Ronald, B., & Farmer, J., 89, Jan. 11, Waterclosets and
[valves.
Rondel, A. J. M. J. (Lake), 3438, Nov. 18, Inkstand.
Rooke, J., 1513, May 18, Slide-valves.
Roquencourt, V. A., 574, Feb. 22, Artificial flowers.
Rosborough, J. L., 324, Feb. 1, Transporting mud, &c.
Rose, W., 751, Mar. 12, Gun barrels and nail rods.
—— W., 2232, July 26, Furnaces.
—— W., 3433, Nov. 18, Bead and moulding frames.
Rose, W. W. (Jewitt), 1971, June 29, Toys.
Rosier, P., 1166, Apr. 19, Preserving supply pipes of cis-
[terns from frost, &c.
Ross, E. (Dawson), 2667, Sep. 9, Utilizing coffee bush.
—— G. B. McK., 3109, Oct. 22, Preserving telegraph
[poles, &c.
—— W., 1414, May 9, Water-closets.
Rossignol, A. A., 990, Apr. 4, Tracing music.
Rossiter, T. R., 2419, Aug. 14, Sewing-machines.
Rostaing, C., & Sprent, T. (Bonneville), 1785, June 13,
[Securing corks in bottles.
Rostron, E., 2490, Aug. 22, Felt.
Roswag, C., & Pauville, A. N. (Johnson), 313, Jan. 31,
[Separating gold and silver from lead.
Rotter, C. G., & Harrison, W. S., 334, Feb. 2, Registering
[votes.
Rouart, S. H., & Mignon, J. B. J. (Johnson), 3422,
[Nov. 16, Freezing; regulating flow of liquids.
—— S. H., Gauduin, O., & Mignon, J. B. J. (Johnson),
[3970, Dec. 31, Depositing copper and alloys.
Rouillé, F. M. (Clark), 1032, Apr. 6, Gas.
Rouse, J. C., 3200, Oct. 29, Jacquard machinery.
—— J. C., & Ward, J. W., 1942, June 27, Jacquard
[apparatus.
Rousseau, C. E., & Cochard, F. (Barlow), 464, Feb. 14,
[Preserving substances.

Routledge, T., 2431, Aug. 15, Treating fibres.
Roux, H., & Thomas-Payen, E. (Bonneville), 1046, Apr. 9,
[Treating metals or ores.
Rowan, S., 284, Jan. 30, Hinges.
—— T., 476, Feb. 15, Preparing oxides for pigments.
—— T., 3590, Nov. 29, Boiler furnaces.
—— W., 584, Feb. 23, Preparing fibres for spinning.
Rowat, R., 1578, May 23, Flexible metallic webs.
Rowe, E., 3173, Oct. 25, Treating metallic oxide earths, &c.
Rowe, James (Morgan-Brown), 2739, Sep. 14, Telegraphs.
Rowe, John, 2969, Oct. 9, Weaving.
Rowe, John L., & Patterson, C. G. (Newton), 3044, Oct. 15,
[Trusses.
Rowlands, M., 1179, Apr. 19, Coke ovens.
Rowlandson, W., 2917, Oct. 3, Cleaning skins.
Rowley, T., 408, Feb. 8, Lubricating spindles.
Rózsavölgyi, L. (Muiron), 3876, Dec. 21, Joints for ear-
[rings, &c.
Ruck, W. D., 2711, Sep. 12, Gas.
Rueff, M. (Lake), 1553, May 22, Rolling bearings.
Ruggieri, E. F. D. (Johnson), 674, Mar. 5, Night signalling.
Ruiseco, J. Count de Susini- (Clark), 300, Jan. 31, Cigarettes.
Rumble, T. W., & Fothergill, B., 668, Mar. 4, Fire and
[burglar proof buildings, &c.
Rump, D. H. (Newton), 3056, Oct. 16, Iron & steel wire.
Runquist, R. (Gilbee), 2615, Sep. 3, Governors.
Rushton, T. H., 3334, Nov. 9, Doubling & winding yarn.
—— T. H., & Dobson, B. & W., 292, Jan. 31, Ginning
[cotton.
—— T. H., & Dobson, B. & W., 434, Feb. 10, Ginning
[cotton.
—— T. H., & Dobson, W., 2378, Aug. 9, Ginning cotton.
—— T. H., & Tonge, R., 2382, Aug. 9, Spinning and
[doubling.
—— T. H., & Macqueen, J., 2737, Sep. 14, Combing
[fibres.
Russ, B., 1964, June 29, Gas.
—— E., 2320, Aug. 3, Box or receptacle for wines, &c.
Russell, C. H., & Sax, J., 1731, June 7, Scoring at bil-
[liards, &c.
—— E., 1274, Apr. 27, Caps for axle-boxes.
—— G., 1817, June 17, Horse-hoes.
—— James, & Dominy, G., 36, Jan. 4, Securing win-
[dow sashes, &c.
—— James, & Hutton, W. R., 794, Mar. 15, Obtaining
[zinc.
—— John S., 227, Jan. 24, Ordnance, projectiles, &c.
—— Joseph, 3138, Oct. 23, Stoves, grates, &c.
—— S., 1485, May 16, Stoppering bottles.
Rust, J., 567, Feb. 22, Composition for building pur-
[poses, &c.
Ruston, J., 3304, Nov. 7, Steam-engines.
Ryder, G. & T., 3413, Nov. 15, Forging machines.
—— T. & G., 3413, Nov. 15, Forging machines.
Rydill, G., 370, Feb. 5, Dyeing, drying, and bleaching.
—— G., 2274, July 30, Dyeing, drying, and bleaching.
—— G., 2886, Oct. 1, Hydro-extractors.
—— G., 2979, Oct. 10, Hydro-extractors.
—— G., 3901, Dec. 24, Furnaces; ventilating rooms;
[drying substances.
—— G., 3938, Dec. 28, Steam-boilers, furnaces, & flues.
Ryerson, J. R. (Turner & Parlin), 3295, Nov. 6, Boot heel.
Ryves, W. H., Trotman, F., & Turner, W., 720, Mar. 8,
[Closing and opening bottles, &c.

S.

Sabberton, J., 2356, Aug. 8, Ventilating railway carriages.
Sacc, F. (Dufrenó), 2529, Aug. 26, Preserving fruit.

- Sacré, A. L., & Slaughter, E., 1364, May 4, Coupling lo-
[comotive engines.
— E., 1805, June 15, Road steamers, locomotives, &c.
Sagar, J., 1900, June 24, Raising and forcing fluids.
Saint Anne, J. (Henderson), 3900, Dec. 24, Match box.
Saint-Aubin, E. L. A. (Gedge), 1047, Apr. 9, Feeding-
[bottles.
Sainte Marie, C. de, 3335, Nov. 9, Tanning.
Salmon, A. (Gedge), 626, Feb. 28, Manure; ammonia.
Salmon, F. W., 214, Jan. 23, Incubators.
— J., & Brownhill, J., 2105, July 12, Bronzing
[paper, &c.
Salmon, N., & Petot, P. J. (Hammond), 622, Feb. 28,
[Awning for vehicles, &c.
Salmon, T., 3943, Dec. 28, Cutting shoe linings, &c.
Salomos, Viscount M. de, & De Lara, G., 2107, July 12,
[Interleaving diaries, &c.
Salt, E., 1901, June 24, Rag engines, &c. for producing pulp.
Samain, P., 69, Jan. 9, Fire-arms.
Samuel, W. H. (Electric Gas Lighting Co.), 2592, Aug. 31,
[Lighting gas by electricity.
Samuelson, A., 3892, Dec. 23, Laying asphalt pave-
[ments, &c.
Sanderson, H. Q. (Haseltine), 2435, Aug. 15, Railway
[carriage springs.
— H. Q. (Haseltine), 2492, Aug. 22, Railway
[carriage springs.
Sanderson, J., W. A. & R., & Paterson, W., 2153, July 18,
[Treating wool.
— R., J. & W. A., & Paterson, W., 2153, July 18,
[Treating wool.
— S., 1569, May 22, Fire indicator.
— S., & Proctor, A., 3161, Oct. 25, Steam-boilers
[and furnaces.
— W. A., R. & J., & Paterson, W., 2153, July 18,
[Treating wool.
Sang, E., 3455, Nov. 19, Spinning.
Saniscovsky, A. L., & Price, T., 3517, Nov. 23, Tin and
[terne plates.
Sansou, J. S., & Mettam, C. (Newton), 46, Jan. 5, Lubri-
[cating railway axles.
Sargent, C., & Temple, C., 690, Mar. 6, Steering apparatus.
— F. D., 748, Mar. 11, Cornice poles; window-
[blind rollers.
Sarney, T. S., & Greener, J. H., 438, Feb. 12, Fastening
[railway rails, &c.
Sarony, O., & Weyde, H. V. (Smith), 641, Mar. 1, Colour-
[ing photographs, &c.
Saunders, I., & Campbell, F. W. (Lake), 1656, May 31,
[Packing for joints.
Saunders, J., & Piper, J., 2920, Oct. 3, Tin & terne plates.
— J. B., 644, Mar. 1, Signalling on railways.
Saunders, J. E., & Knowles, C. B. (Lake), 2571, Aug. 29,
[Blast pipe locomotive engines.
Saunders, R., 278, Jan. 30, Anchors.
Sauvée, A. (Duclos), 2024, July 4, Motive-power.
— A. (Duclos), 2967, Oct. 9, Steam-boilers.
Sax, J., & Russell, C. H., 1731, June 7, Scoring at bil-
[boards, &c.
— J. K., 2824, Sep. 24, Railway wheels.
Saxby, F. E., & Winnington, J., 1037, Apr. 8, Regulating
[supply of fibres to machinery.
Saxe, G. G., Clayton, C. H., & La Monte, G. (Haseltine),
[2670, Sep. 9, Colored and figured paper.
Seala, L., 1709, June 6, Dyeing.
Seantlebury, W., 1860, June 20, Raising, &c. blinds and
[shutters.
Scattergood, D., 3881, Dec. 21, Finishing hosiery, &c.
Schäffer, B. A., & Budenberg, C. F. (Budenberg), 95,
[Jan. 11, Liquid-meters.
— B. A., & Budenberg, C. F. (Budenberg), 860,
[Mar. 21, Pulley blocks.
Schanschieff, A. (Marquis de Forville), 767, Mar. 14,
[Signalling on railways.
— A. (Marquis de Forville), 769, Mar. 14,
[Telegraphic signals and despatches.
Scheerer, — (Gordon), 2434, Aug. 15, Iron and steel.
Scheliha, Col. Von (Wellesley), 3536, Nov. 25, Torpedoes.
Schemioth, C., 92, Jan. 11, Valve gear of steam-engines.
— C., 93, Jan. 11, Wheels for traction and other
[engines.
— C., 94, Jan. 11, Furnaces.
Schildberg, H., 3396, Nov. 14, Velocipedes.
Schlamp, E. (Prince), 3332, Nov. 9, Raising water.
Schlesinger, A. A. (Dixon), 98, Jan. 12, Combined tool.
Schlesinger, A. A. (Schlesinger), 2049, July 6, Beating
[carpets, &c.
Schlesinger, C. F. (Schlesinger), 2049, July 6, Beating
[carpets, &c.
Schmitt, J. (Lake), 3228, Oct. 31, Heated air motors.
Schneider, G. (Newton), 917, Mar. 26, Telegraphs.
Schneur, J., 3178, Oct. 26, Armour-plating ships, &c.
Schofield, J., Butel, A., & Pollard, J. W., 2630, Sep. 4,
[Treating oxides of iron.
Scholefield, H., & Mallet, R., 2952, Oct. 7, Massing mineral
[substances.
Scholz, A. (Hunt), 1004, Apr. 5, Indicating speed of
[trains, &c.
Schor, N., 2444, Aug. 16, Cutting out coats, &c.
Schott, E. F. A. (Lake), 279, Jan. 30, Gypsum cement.
— E. F. A. (Lake), 2119, July 13, Gypsum cement.
Schott, J. B., 3793, Dec. 14, Cigar tube or holder.
Schucht, J. H., & Goffié, C. F. L., 2445, Aug. 16, Piano
[keys, &c.
Schultz, H. (Morgan-Brown), 3614, Nov. 30, Fastening
[stays, &c.
Schultze, C. J. (Hughes), 2889, Oct. 1, Opening, &c.
[solid, liquid, and aeriform matters.
Schulz, —, & Heyl, — (Brunner), 3470, Nov. 20, Anneal-
[ing, &c. metals.
Schulze, O. (Streubel), 1385, May 7, Pen and cigarette
[holders.
— O. (Streubel), 2880, Sep. 30, Pen, cigar, and
[cigarette holders.
Schüssler, A., Floyd, J. R., & Dieterich, C. F. (Clark),
[901, Mar. 25, Gas retorts.
Schüssler, C. F. & Wagner, C. W. F., 333, Feb. 2, Motive-
[power.
Scott, A., Young, W., & Brash, P., 2487, Aug. 21, Pro-
[ducing gas and oil from coal, &c.
— F. W., 2376, Aug. 9, Belts or bands for colliery
[winding, suspension bridges, &c.
— G. L., 3719, Dec. 7, Steel ingot moulds.
— H. Y. D., 38, Jan. 4, Purifying gas.
— H. Y. D., 849, Mar. 20, Treating sewage water.
— H. Y. D., 2538, Aug. 26, Sewage and manure.
— H. Y. D., 3028, Oct. 14, Treating sewage.
— H. Y. D., 3355, Nov. 11, Treating sewage, &c.
— H. Y. D., 3755, Dec. 11, Treating sewage water.
— H. Y. D. & T. W., 3670, Dec. 4, Treating sewage
[with lime.
— James, 658, Mar. 2, Thrust bearings for screw shafts.
— John, & Mirfield, M., 1661, June 1, Preparing
[fibres for spinning.
— John, & Douglas, J., 2310, Aug. 2, Adjusting ships'
[compasses, &c.
— John, Craven, J., Fox, S., & Tannett, J., 660, Mar. 2,
[Boring shaft couplings, &c.
— T. W. & H. Y. D., 3670, Dec. 4, Treating sewage
[with lime.
— U., & Spencer, G., 3694, Dec. 6, Railway car-
[riages, &c.
— W., 1220, Apr. 24, Puddling & balling furnaces.
— W. D., 1185, Apr. 20, Governors.

- Scott, W. M., 42, Jan. 5, Fire-arms.
Scowden, T. R. (Bousfield), 3968, Dec. 31, Steel.
 Scrivener, W. C., Bidder, J., & Lamb, A. C. L., 2149, [July 17, Clasp for necklaces and wearing apparel.
 Scruton, T., 517, Feb. 17, Coffins.
 — T. K., 194, Jan. 20, Neckties.
Seal-Lock Co., American (Mills), 252, Jan. 25, Seal-locks.
Seaman, R., & Shepard, H. W. (Lake), 444, Feb. 12, Cans [and locking same.
 Searle, R., 1778, June 12, Motive-power.
 Seville, C. F., 2491, Aug. 22, Schisto-asphaltic and bituminous-beton.
 Sébillot, A., 2657, Sep. 7, Transporting ships, &c. on land.
 Seddon, J. P., 106, Jan. 13, Ventilating sewers, &c.; deodorising gases.
Segoffin, C. D. (Brewer), 2900, Oct. 2, Studs or buttons.
Seibert, J. H. (Lake), 525, Feb. 17, Packing cases for [alkalies, &c.
 Seitz, C. D. J., 3446, Nov. 19, Treating wood, &c. for [paper.
 Selby, T. C., 3466, Nov. 20, Chest shield for animals.
 Selden, W. C., 3611, Nov. 30, Steam-pumps.
 Sellars, J., 393, Feb. 7, Stiffening & weighting cloth, &c.
 — J. C., 100, Jan. 12, Artificial fuel.
 — J. C., 989, Apr. 4, Obtaining hydrocarbons, gas [and coke.
Sellers, G. H. (Johnson), 59, Jan. 8, Melting furnaces.
 — G. H. & W. (Johnson), 50, Jan. 6, Regenerating [heat.
 — W. (Johnson), 80, Jan. 10, Discharging molten [metal; casting same.
 — W. (Johnson), 1799, June 14, Iron.
 — W. & G. H. (Johnson), 50, Jan. 6, Regenerating [heat.
 Selwyn, J. H., 1608, May 27, Treating ores of silver.
 Senior, J., 3889, Dec. 23, Preparing skins or hides.
 Servante, D., 3720, Dec. 7, Printing paper.
 Setchell, O. C., 457, Feb. 13, Lighting fires.
Severance W. N. (Lake), 2719, Sep. 13, Tempering and [refining steel.
Sewastganoff, N., Dornowo, D., & Kniaghinsky, P. [(Doubelt), 1189, Apr. 20, Transmitting and [registering telegraphic despatches.
 — N., Dornowo, D., & Kniaghinsky, P. [(Doubelt), 1822, June 17, Transmitting [telegraphic despatches.
 — N., Dornowo, D., & Kniaghinsky, P. [(Doubelt), 2945, Oct. 5, Transmitting and [registering telegraphic despatches.
 Sewing Machine Co., Singer, 489, Feb. 15, Sewing-machines.
Sewing Machine Co., Wilson (Johnson), 2441, Aug. 15, [Sewing-machines.
 Seyd, E., 368, Feb. 5, Casting bars or plates of silver, &c.
Seymour, C. E., & Coté, L. (Lake), 760, Mar. 12, Boots [and shoes.
 Seymour, P. W., 288, Jan. 30, Portable magnets.
 — P. W., 3600, Nov. 29, Therapeutic plasters.
 Shackleton, J., & Binns, J. P., 1599, May 25, "Tying-[in" warps.
 Shanks, A. F., 3316, Nov. 8, Metal boxes or cases.
 — F. & R., 2899, Oct. 2, Landaus and other carriages.
 — H., 1771, June 12, Drawing retorts.
 — J., 2643, Sep. 5, Water-closets, taps, &c.
 — J., 3796, Dec. 14, Water-supply to closets, urinals, &c.
 — P. M., & Johnson, J. R., 3074, Oct. 17, Printing.
 — R. & F., 2899, Oct. 2, Landaus and other carriages.
 Sharpe, C. D., & Goulton, W., 577, Feb. 22, Draining [ploughs.
 Shaw, E., 2375, Aug. 9, Perambulators.
 — G. & T., 1685, June 4, Rotary brushes and bur-nishers.
 — H., Ditchfield, W., & Knowles, J., 122, Jan. 15, [Weaving.
 — R., 1188, Apr. 20, Drawing frames for fibres.
 — R., 1528, May 18, Drawing frames for fibres.
 — R.D.C., 3868, Dec. 20, Loading or lifting manure, &c.
 — T. & G., 1685, June 4, Rotary brushes and bur-nishers.
 — T., Keir, J., Craven, J., & Cockill, J., 165, Jan. 18, [Scouring and setting hides, &c.
 — W., & Ingham, J., 1535, May 20, Looms.
Shedd, D. (Haseltine), 2994, Oct. 10, Sewing books, &c.
Shedlock, A. (Shedlock), 3058, Oct. 16, Rymer & counter [bore.
 Shedlock, J. F. (Shedlock), 3058, Oct. 16, Rymer & [counter bore.
 — J. F., & J. J., 3728, Dec. 9, Lighting towns, &c.
 — J. J., 3057, Oct. 16, Hydrocarbon gases and [vapours.
 — J. J. & J. F., 3728, Dec. 9, Lighting towns, &c.
 Sheehan, T., 1454, May 13, Steelifying iron.
Sheffield, G. V. & Mellor, G. K. (Clark), 399, Feb. 7, [Sewing leather; thread for same.
 Sheffield, J., 1435, May 11, Glass melting furnaces.
 — J., 3683, Dec. 5, Glass and other furnaces.
Shepard, H. W., & Seaman, R. (Lake), 444, Feb. 12, Cans [and locking same.
 Shepherd, B., & Stuckey, F., 2756, Sep. 17, Tunnel [ling, &c.
Sheppard, C., & Bulmer, H. (Clark), 3935, Dec. 27, Brick [machines.
 Sherring, W. A., & Ridpath, T. A., 3167, Oct. 25, Mag-neto-electric power for signalling, &c.
 Shields, J., 2829, Sep. 25, Combing fringes.
Shim, J. (Barlow), 871, Mar. 22, Looms.
 Shorland, G. L., 1169, Apr. 19, Fire-grates.
Short, J. (Clark), 1043, Apr. 8, Looms.
 Shrimpton, Z., 907, Mar. 25, Crochet needles, pen-holders, &c.
 Shutt, T., & Brooks, E., 3351, Nov. 11, Economizing fuel.
 Shuttleworth, J., & Laycock, T., 3303, Nov. 7, Shuttle spools.
Sickels, G., & Thorndike, J. H. (Hunt), 83, Jan. 10, Fluid [meters.
 Sidebotham, C. H., 3861, Dec. 20, School desks and seats.
Sidebotham, J. (Clark), 2338, Aug. 6, Lubricating axle [boxes.
 Sieber, C. H., & Furnevall, J., 17, Jan. 3, Dyeing yarns.
 Siecinoski, C. L., 3451, Nov. 19, Tracing paper & fluid.
 Siemens, C. H., 1473, May 15, Telegraphs.
 — C. H., & Siemens, W., 2923, Oct. 3, Telegraphs [and signals.
 — C. W., 2861, Sep. 28, Iron and steel; furnaces.
 — C. W., 3642, Dec. 3, Smelting furnaces.
 — C. W. (Siemens), 1919, June 25, Obtaining and [applying electric currents.
 — C. W. (Siemens), 2152, July 18, Glass furnaces.
 — C. W., & Siemens, F., 3478, Nov. 21, Glass [furnaces.
 Siemens, F. (Siemens), 2152, July 18, Glass furnaces.
 — F., & Siemens, C. W., 3478, Nov. 21, Glass [furnaces.
 — W. (Siemens), 1919, June 25, Obtaining and [applying electric currents.
 — W., & Siemens, C. H., 2923, Oct. 3, Telegraphs [and signals.
 Sievier, H. G., 843, Mar. 20, Umbrellas and parasols.
 Sillar, R. G. & W. C., & Rawson, C., 575, Feb. 22, Treat-ing and deodorising excreta.
 — R. G. & W. C., & Rawson, C., 1806, June 15, [Manure.

- Sillar, W. C. & R. G., & Rawson, C., 575, Feb. 22, Treat-
[ing and deodorising excreta.
— W. C. & R. G., & Rawson, C., 1806, June 15,
[Manure.
Silva, W. D' (Le Gros), 2008, July 3, Drilling rock, &c.
Silver, T. (Lake), 218, Jan. 23, Hoists or elevators.
— T. (Lake), 2185, July 22, Hoists.
Silver, T., 2350, Aug. 7, Lamp burner.
Silverlock, W. B., 3054, Oct. 16, Closing bottles, flasks, &c.
Silvester, A. (Silvester), 5, Jan. 1, Carriage wheels.
Silvester, H. (Silvester), 5, Jan. 1, Carriage wheels.
Simcox, E., & Banks, W., 1224, Apr. 24, Box-irons.
Simmons, Z. G. (Lake), 3736, Dec. 9, Insulating compound.
Simon, L. & R. (Sommerfeld), 3863, Dec. 20, Petroleum
[gas.
— L. V., 1587, May 24, Elementary gun.
— R. & L. (Sommerfeld), 3863, Dec. 20, Petroleum gas.
Simonds, N. J. (Hunt), 529, Feb. 19, Stiffenings for boots.
Simonett, I., & Robertson, G., 2038, July 5, Cleansing
[woven fabrics.
Simons, J. P. (Clark), 2187, July 22, Ornamental tiles.
Simons, W., & Brown, A., 494, Feb. 16, Steam dredgers.
Simpson, E. T., & Hurd, F., 2106, July 12, Compressing
[air.
— E. T., & Hurd, F., 3241, Nov. 1, Excavating
[coal, &c.
— J., 754, Mar. 12, Growing celery and cardoons.
— R. W., Hopps, R., & Johnson, D., 1929, June 26,
[Scribbling wool, &c.
— S., 146, Jan. 17, Water-closets.
Sims, J., & Holmes, C., 3042, Oct. 15, Heating buildings.
Sinclair, G., 3716, Dec. 7, Pulping fibres; evaporating
[liquids, &c.
Sinclair, J., & Lange, F. H. (Mills), 1130, Apr. 16, Sheet
[iron.
Singer Sewing Machine Co. (Newton), 489, Feb. 15, Sew-
[ing-machines.
Sissons, W., & White, P. P., 1918, June 25, Pile-driving.
Skinner, F. F., & Wood, J. F. (Mills), 3389, Nov. 14,
[Cleansing and smutting grain, &c.
Skinner, G., & Nicholson, J., 2931, Oct. 4, Steam-boilers.
— J. A., Vine, J. & J., & Brown, J., 2010, July 3,
[Fire-arms.
Skwarcow, J., & Baranowski, J. J., 3034, Oct. 15, Fixing
[bottle capsules.
Slade, W. B. M., & Barnett, H. B., 2913, Oct. 3, Disin-
[fecting and cleansing liquids.
— W. B. M., & Barnett, H. B., 2934, Oct. 4, Deo-
[dorizing and disinfecting fluids.
Slater, A., 1395, May 7, Printing from photography.
— T., 1628, May 29, Electric-light, &c.
Slaughter, E., & Sacré, A. L., 1364, May 4, Coupling lo-
[comotive engines.
Sleet, S. (Newton), 3606, Nov. 30, Railway axle-boxes.
Sloper, J., 3740, Dec. 10, Perforating paper, &c.
Smale, J., & Conisbee, W., 3111, Oct. 22, Printing ma-
[chine cylinders.
Smeaton, J. G., 2159, July 18, Generating steam; circu-
[lating heated water.
Smiles, J., 3519, Nov. 23, Fire-arms.
Smith, Aaron, 182, Jan. 19, Puddling iron.
— Alfred, 2646, Sep. 6, Stamping, punching, and
[embossing.
— Alfred, & Kenyon, E., 1331, May 2, Velvets,
[velveteens, &c.
— Arthur Pye- & Ribbans, C., 831, Mar. 19, Heat
[non-conducting compositions.
— B., Stake, J., Tolson, R., Firth, M., & Bradley, C.,
[700, Mar. 7, Combing fibres.
— B. T., & Cameron, J. G., 3127, Oct. 23, Water-closets.
— C. (Alliger), 2246, July 27, Lettering and orna-
[menting mirrors.
Smith, C. J., 1750, June 10, Coupling hose pipes.
— C. W., 1802, June 15, Extracting indigo, &c.
Smith, C. W. M. (Lake), 2065, July 9, Compound for
[paving, &c.
— E. J. (Lake), 1734, June 8, Stair rods & fastenings.
Smith, F. St. G. (Copeland), 2565, Aug. 28, Plugs and
[ferrules for boiler tubes.
— G., 395, Feb. 7, Clipping animals.
— G., 2108, July 12, Drawing off liquids from casks.
— G., 2830, Sep. 25, Enamelling stone-ware, &c.
— G., 3657, Dec. 4, Fire-proof buildings.
— G., & Lewty, J., 3018, Oct. 14, Nose pegs for
[spinning mules.
— G. B., 1314, May 1, Manger logs or balls.
— G. H., 624, Feb. 28, Metallic alloys; preventing
[corrosion.
— G. H., 921, Mar. 26, Preventing corrosion of pipes, &c.
— G. H., 2782, Sep. 19, Hardening brick, porous
[stone, &c.
— G. H., 3915, Dec. 24, Carbonizing clay, plaster, &c.
— G. R. (Weyde & Sarony), 641, Mar. 1, Colouring
[photographs.
— H., 2862, Sep. 28, Blowers & brushes for mills, &c.
— H. J., 1267, Apr. 27, Extracting, &c. metallic oxides.
— I., & Mayall, S., 2835, Sep. 25, Roving, spinning
[and doubling.
— James, & Conlong, J., 1717, June 7, "Counter"
[for hank-winding machines, &c.
— James F., 3577, Nov. 28, Sluices and weirs.
— John, 1, Jan. 1, Temples for looms.
— John, 712, Mar. 8, Steam-boilers.
— John, 1291, Apr. 30, Beetling woven fabrics.
— John, 3179, Oct. 26, Pressure valves.
— John, 3313, Nov. 8, Fire-grates and chimneys.
— John, & Robinson, J., 3858, Dec. 19, Shaping
[cask staves.
— John W., 1022, Apr. 6, Ventilating sewers & drains.
— L., 2196, July 23, Spring-mattresses, &c.
— P., & Firth, W., 1766, June 11, Spinning & doubling.
— R., 842, Mar. 20, Sound boards of instruments.
— R., 3319, Nov. 8, Steam-boilers.
— R. F., 425, Feb. 10, Yellow and red prussiates.
— S., 1602, May 27, Opening, &c. carriage doors.
— S. B., & Willans, J. W., 1876, June 21, Smelting
[ores and re-heating metals.
— T., 911, Mar. 26, Fire-escapes.
— T. J. (Du Motay), 2, Jan. 1, Treating lyes in
[preparing fibres, &c.
— T. J. (Poron & Poron), 204, Jan. 22, Knitting
[machines.
— T. J. (Marée & Varlet), 442, Feb. 12, Carding
[engines.
— T. J. (Michaels & Broadwell), 469, Feb. 14, Re-
[tarding railway trains.
— T. J. (Michaels & Broadwell), 477, Feb. 15, Rail-
[way carriages.
— T. J. (Martin), 768, Mar. 14, Gases for heating, &c.
— T. J. (Casse & Son), 1178, Apr. 19, Jacquard
[machinery.
— T. J. (Hess), 1206, Apr. 22, Buttons.
— T. J. (Kastner & Lavignac), 1648, May 31, Pro-
[ducing musical tones.
— T. J. (Vigoureux), 3145, Oct. 24, Threads; fabrics.
— T. J. (Baranovsky & Broadwell), 3186, Oct. 26,
[Machine guns, frames, and cartridge cases.
— T. J. (Delbanco), 3419, Nov. 16, Stopping vehicles.
— T. W., Minasi, C., & Meiter, C. W., 3457, Nov. 19,
[Tobacco pouches.
— W., 2028, July 4, Railroads and carriages.
— W., 3561, Nov. 27, Looms.
— W., & Hedley, G. H. C. & T. A., 3300, Nov. 7, Gas.
— W. A., 759, Mar. 12, Purse-glove.

- Smith, W. F., & Coventry, A., 290, Jan. 31, Planing machines.
 — W. M., & Spencer, G., 3964, Dec. 31, Tempering steel.
 — W. R. W., 3667, Dec. 4, Consuming smoke.
 — W. R. W., 3717, Dec. 7, Consuming smoke.
 — W. Wyke, 2590, Aug. 31, Harness.
 Smyth, A., & Ramsay, C. T., 2752, Sep. 17, Drying fibres
 [and grain, &c.]
 — A., & Toller, A., 3711, Dec. 7, Fire-bars.
 — D. McC., 1131, Apr. 16, Sewing-machines.
 — R., 3857, Dec. 19, Feathering ships' paddles.
 — S. R., 187, Jan. 20, Working sewing-machines.
 Snape, R., 3450, Nov. 19, Looms.
 Snelus, G. J., 908, Mar. 25, Cupola furnaces.
 Soame, S. G., 1277, Apr. 29, Raising & stacking hay, &c.
 Société Anonyme des Manufactures des Glaces et Produits
 Chimiques (Johnson), 2220, July 25, Plate glass.
 Solari, J. (Poggi), 1928, June 26, Motive-power.
 Solvay, E., 1525, May 18, Carbonates of soda, &c.
 Somerville, J., 776, Mar. 14, Gas-retorts.
 Sommerfeld, W. (Simon & Simon), 3863, Dec. 20, Petro-
 [leum gas.]
 Sonnois, J., & Lemaire, A. (Johnson), 1791, June 14,
 [Separating volatile and condensable gases.]
 Sonstadt, E., 1054, Apr. 10, Iodide & bromide of potassium.
 Sorby, S., & Richardson, J. C., 1150, Apr. 17, Ploughs.
 Soul, M. A. (Haelein), 821, Mar. 19, Navigable balloons.
 — M. A. (Neuerburg), 1558, May 22, Compressing air
 [or gases.]
 — M. A. (Neuerburg), 1980, July 1, Boring rocks, &c.
 — M. A. (Neuerburg), 3765, Dec. 12, Boring rocks, &c.
 Southall, C. H., 1308, May 1, Boots and shoes.
 — C. H., 2918, Oct. 3, Boots and shoes.
 Southan, T., & Jackson, T., 2690, Sep. 11, Fetting for fur-
 [naces.]
 Southby, A. G., 646, Mar. 1, Warming apparatus.
 — A. G., & Blyth, F. D., 2417, Aug. 14, Pulping
 [wood for paper.]
 Spagnoletti, C. E., 2240, July 27, Tell tale registering
 [mechanism.]
 Spahn, E. P., 1970, June 29, Camera stands.
 Sparre, J. von (Prince), 2059, July 8, Boring instrument.
 Sparrow, T. D. T., & Spencer, C. G., 723, Mar. 9, Boomerangs.
 Sparrow, W., Emery, S. W., & Doyen, E. P. (Lake), 770,
 [Mar. 14, Preventing injury to railway carriages.]
 Speakman, T. S. (Knott), 2171, July 20, Furnaces.
 — T. S. (Knott), 2172, July 20, Lubricator.
 Speight, A. G., 1732, June 7, Collars, shirt fronts, &c.
 — A. G., 2377, Aug. 9, Fronts for wear.
 — G., 562, Feb. 21, Collars, cuffs, wristbands, &c.
 — J., & Bradley, L., 2143, July 17, Forming roads.
 Speirs, D., & Ormerod, J., 1006, Apr. 5, Red colour.
 — J., 3237, Nov. 1, Weaving gauze fabrics.
 Spence, E. J. & R., 853, Mar. 20, Bricks.
 — H. G., 56, Jan. 6, Connecting pipes, cocks, &c.
 [to ships.]
 — J. B. (Cheever), 3273, Nov. 4, Anthracene.
 — R. & E. J., 853, Mar. 20, Bricks.
 — W. (Oakley), 138, Jan. 17, Railway joints.
 — W. (Coutelier), 1108, Apr. 13, Metallic coverings
 [for roofs and walls.]
 — W. (Pathier), 1852, June 19, Curryng leather.
 Spencer, A., & Richardson, T. & J. W., 2337, Aug. 6,
 [Puddling furnaces, &c.]
 — A., & Richardson, T. & J. W., 3609, Nov. 30,
 [Refining iron and steel.]
 — C. G., & Sparrow, T. D. T., 723, Mar. 9, Boomerangs.
 — G. (White), 2576, Aug. 30, Purifying gas.
 — G., & Scott, U., 3694, Dec. 6, Railway car-
 [riages, &c.]
 — G., & Smith, W. M., 3964, Dec. 31, Tempering steel.
 — J. H., 3804, Dec. 16, Water-closets; preventing
 [water waste.]
 Spencer, J. W., 3957, Dec. 30, Producing iron.
 Spencer, R. (Newton), 2623, Sep. 3, Pulverizing and sepa-
 [rating minerals.]
 Sperry, S. D. (Lake), 2563, Aug. 28, Type-setting machines.
 Spineux, F. (Macken), 8354, Nov. 11, Preparing and
 [spinning fibres.]
 Spinning Co., Augsburg (Brookes), 2498, Aug. 22, Stop
 [motion for spinning apparatus, &c.]
 Spittle, T., 2340, Aug. 6, Cask stands.
 Spong, J. O., 3020, Oct. 14, Producing changes in effect
 [for advertising, &c.]
 Spooner, C. E., & Hughes, J. S., 1315, May 1, Motive-
 [power for railways and tramways.]
 Spooner, D. B. (Haseltine), 3693, Dec. 6, Meters.
 Sprague, J. D., 306, Jan. 31, Sweeping roads, floors, &c.
 — J. D., 3810, Dec. 16, Printing paper.
 Sprague, W. (Lake), 421, Feb. 9, Mowing and reaping.
 Spratt, J., 1468, Hay 14, Food for cats.
 Sprent, T., & Rostaing, C. (Bonneville), 1785, June 13,
 [Securing corks in bottles.]
 Stableford, W., 2732, Sep. 13, Railway couplings.
 Stake, J., Tolson, R., Firth, M., Bradley, C., & Smith, B.,
 [700, Mar. 7, Combing fibres.]
 Stancliff, G., & Floyd, J. R. (Clark), 1747, June 10,
 [Fastening lids of gas retorts.]
 Standen, B. B., 2687, Sep. 11, Collecting and treating
 [excrement.]
 Stanford, E. C. C., 2118, July 13, Preserving and deodo-
 [rising seaweed, &c.]
 Stanley, D., 3409, Nov. 15, Motive-power.
 — J., 3172, Oct. 25, Wheeled vehicles.
 — W. F., 2213, July 25, Electrical apparatus.
 Stapleton, J., 3733, Dec. 9, Turret platforms of war-ships.
 Starr, R. B., 2079, July 10, Registering apparatus for
 [omnibuses, &c.]
 Staughton, J. McL. (Clark), 3680, Dec. 2, Joint for rail-
 [way rails.]
 Stavers, G., 1117, Apr. 15, Steering and manœuvring
 [vessels.]
 Stearns, J. B., 3344, Nov. 11, Electric telegraphs.
 Steedman, J., 3003, Oct. 11, Acetic acid.
 Steel, James, 3041, Oct. 15, Cooling liquids.
 — John, 3407, Nov. 15, Office indicator.
 Steele, J., 299, Jan. 31, Claw-wrench.
 Steinbrenner, D. C. E. (Jensen), 1474, May 15, Bridge
 [piers, wharves, docks, &c.]
 Steiner, R. (Peebles), 946, Mar. 30, Steam-engines.
 Steinway, C. F. T. (Lake), 1459, May 14, Piano-fortes.
 Stenhouse, J., & Thom, J., 2186, July 22, Treating fatty
 [substances.]
 — J., & Higgin, J., 3949, Dec. 30, Arseniates
 [and phosphates.]
 Stephens, A. P., 1341, May 3, Vices.
 — H., & Harvey, J., 1124, Apr. 16, Treating ores.
 — R. B., 1342, May 3, Condensing milk.
 — S. H., 677, Mar. 5, Reducing ores; grinding
 [paint, &c.]
 — S. H., & Williams, T., 1194, Apr. 20, Reducing
 [tin stuff, &c.]
 Stern, L. (Lake), 979, Apr. 3, Compound for cleansing
 [carpets, &c.]
 Stevens, A. J., 3547, Nov. 26, Steam and other engines.
 — B. F. (Wood), 1932, June 26, Raising, &c. ships'
 [boats.]
 — D., 540, Feb. 19, Grinding or reducing minerals.
 — J. S., 2541, Aug. 27, Window-sash fasteners.
 — N. E., & Cullum, C., 2726, Sep. 13, Games.
 — N. E., & Cullum, C., 2727, Sep. 13, Roller blinds.
 Stevenson, A. C., 870, Mar. 22, Reverberatory furnaces.
 — C., 1008, Apr. 5, Paper-pulp.
 — James & John, & Carlile, T., 1695, June 5,
 [Soda and potash.]

- Stevenson, John & James, & Carlile, T., 1695, June 5, [Soda and potash].
- Stever, J., Boughton, G. A., & Newton, I. E. (Hughes), 2688, Sep. 11, Driving loom shuttles.
- Stewart, A. & J., & Wotherspoon, J., 1441, May 11, Steam-boilers.
- Stewart, H. S. (Haseltine), 2488, Aug. 21, Treadles.
- Stewart, J. & A., & Wotherspoon, J., 1441, May 11, Steam-boilers.
- J. F., & Defty, H., 2020, July 4, Puddling furnaces.
- R. B., 3508, Nov. 23, Boot and shoe heels.
- R. B., 3860, Dec. 19, Covering stairs and floor-ings.
- Stidolph, T. W., 2588, Aug. 30, Bedsteads.
- Stiff, W. C., 3321, Nov. 8, Metallic cop tubes or caps.
- Stocker, A. R., 3062, Oct. 17, Appendages for feeding [bottles, &c].
- A. S., 154, Jan. 18, Infants' feeding bottles, &c.
- Stockwell, N. P. (Howe Machine Co.), 401, Feb. 7, Sewing-machines.
- N. P. (Howe Machine Co.), 1191, Apr. 20, [Attachments for sewing-machines].
- Stokes, L. & W., 156, Jan. 18, Loom shuttles.
- W. & L., 156, Jan. 18, Loom shuttles.
- Stone, J., 2543, Aug. 27, Warming rooms and buildings.
- J., 2580, Aug. 30, Foot warmer.
- R., 203, Jan. 22, Moulding ceilings, &c.
- R., 1115, Apr. 15, Casting or moulding ceilings, [walls, vessels, &c].
- R., 2473, Aug. 20, Concrete for roadways, &c.
- R., 2790, Sep. 20, Artificial fuel.
- Stones, C. W., & Lowcock, A., 2520, Aug. 24, Weirs and [sluices].
- J., & Castle, J., 2007, July 3, Revolving shutters [and partitions].
- Stoney, F. G. M., 2372, Aug. 9, Stop valves or sluices.
- Storck, H., Hentsch, A. & E., Lutscher, A., & Grininger, F. (Browne), 2286, July 30, Treating phosphate, &c.
- H., Hentsch, E. & A., Lutscher, A., & Grininger, F. (Lyte), 3552, Nov. 26, Acetate of alumina.
- H., Hentsch, E. & A., Lutscher, A., & Grininger, F. (Lyte), 3585, Nov. 28, Treating phosphoric acid [for phosphates, &c].
- H., Hentsch, E. & A., Lutscher, A., & Grininger, F. (& Decottegnie, A. (Lyte), 3685, Dec. 5, Distilling, &c.
- Storer, M. F., Keys, C. G., & Osgood, H. (Newton), 576, [Feb. 22, Hoists and safety hatches].
- Story, J. S., & Lynde, F. G., 2791, Sep. 20, Excavating [machine].
- Stother, W., & Milton, G., 1680, June 4, Folding desks.
- Stott, F. L., & Bayley, C. H., 581, Feb. 23, Winding yarn [or thread].
- F. L., & Brierley, M., 709, Mar. 8, Yarns or threads.
- F. L., & Bayley, C. H., 3174, Oct. 26, Reeling [yarns, &c].
- H., 449, Feb. 13, Ventilating sewers and drains.
- J. J., 1808, June 15, Collars for spinning, &c.
- Strachan, R. (Gibson), 2799, Sep. 21, Iron ships.
- Strange, A., & Cornish, K. H., 3960, Dec. 31, Casks.
- Strauss, A. (Harris), 745, Mar. 11, Indicating height of [bilge water].
- Streubel, O. (Schulze), 1385, May 7, Pen and cigarette holders.
- O. (Schulze), 2880, Sep. 30, Pen, cigar, and [cigarette holders].
- Striedter, A. (Vaughan), 2277, July 30, Phosphates of [lime].
- Stroh, J. M. A., & Wheatstone, Sir C., 39, Jan. 4, Musical [instruments].
- J. M. A., & Wheatstone, Sir C., 473, Feb. 15, [Telegraphs, &c].
- Stroudley, W., & Tandy, G. G., 3540, Nov. 25, Lamps.
- Stuart, C., & Hare, G. S., 3359, Nov. 12, Steam-boiler [tube stopper].
- W., 1777, June 12, Window-sash fastener.
- Stubbs, J., 1790, June 13, Reel for winding yarns, &c.
- Stuckey, F., & Shepherd, B., 2756, Sep. 17, Tunnelling, &c.
- Sturgeon, T., 507, Feb. 16, Dressing millstones, &c.
- Stute, A. (Hughes), 3203, Oct. 29, File cutting machine.
- Suckling, N. J., 2747, Sep. 16, Boilers.
- N. J., 3893, Dec. 23, Steam-generators.
- Sugden, H. T., 1504, May 17, Folding chairs.
- Sugden, T. (Walker), 166, Jan. 18, Cotton gins.
- Sugden, Z., & Hartley, J., 1698, June 5, Boilers for [heating buildings].
- Z., & Hartley, J., 1910, June 24, Boilers for [heating buildings, &c].
- Sugg, W. T., 2841, Sep. 26, Gas regulators.
- Suisse, Societe Industrielle (Johnson), 3955, Dec. 30, [Fire-arms].
- Sullivan, James, 1689, June 4, Safety apparatus for rollers [on rolling mills, &c].
- John, 111, Jan. 13, Administering pills.
- John, 659, Mar. 2, Chamber vessels.
- Sullivan, T. J. (Brolly), 881, Mar. 22, Combination locks.
- Sulzer, A. & H., & Ernst, J. R. (Imray), 2193, July 23, [Steam cylinder valves].
- H. & A., & Ernst, J. R. (Imray), 2193, July 23, [Steam cylinder valves].
- Sunley, J., 643, Mar. 1, Cutting edges of grass lawns, &c.
- Susini-Ruiseco, J., Count de (Clark), 300, Jan. 31, Cigarettes.
- Sutcliffe, H. & W., 2194, July 23, Stench traps or syphon [pipes].
- J., 43, Jan. 5, Preventing railway collisions.
- J., & Parker, D., 3027, Oct. 14, Warping, &c. [yarns].
- R., 673, Mar. 5, Steam-engine lubricators.
- R., 2386, Aug. 10, Utilizing exhaust steam.
- W. & H., 2194, July 23, Stench traps or syphon [pipes].
- W. S., 2112, July 13, Shutters, doors and win-[dows, &c].
- Sutherland J. (Lake), 1418, May 9, Spinning.
- Sutherland, J., 1432, May 11, Puddling furnaces.
- W. S., 385, Feb. 6, Welding iron plates, &c.
- Sutherst, S., & Brimelow, P., 3357, Nov. 12, Railway [couplings].
- Swain, G., 3625, Dec. 2, Locketts, brooches, &c.
- S., 1413, May 9, Gas fittings.
- S., 2874, Sep. 30, Joint for lamp pipes.
- Swallow, J. T., & Newton, L., 2343, Aug. 7, Drinking [vessels].
- Sweet, A., 3082, Oct. 18, Water waste preventer.
- Sweeting, F. J., 1367, May 4, Lowering ship's boats.
- Swett, C., & Aiken, J. E. (Lake), 2099, July 11, Bale-ties, &c.
- Swift, G. (Lake), 1044, Apr. 8, Paper-pulp.
- Swinburn, J. F., 110, Jan. 13, Fire-arms.
- J. F., 1895, June 22, Fire-arms.
- Swindells, I., & Kenyon, H. & H., 1540, May 21, Chlorine and sulphuric acid.
- J., 589, Feb. 23, Self-acting barrel tilts.
- R. & Wormald, J., 478, Feb. 15, Spanners.
- Swindlehurst, W., & Cates, S., 1557, May 22, Transfer [printing].
- Sykes, H., & Glover, W., 1426, May 10, Governors.
- W. R., & Francis, F. R., 3448, Nov. 19, Working [railway signals, &c].
- Symington, R. S., 3880, Dec. 21, Applying gas for heating.
- W. W., 955, Mar. 30, Treating sewage, &c.
- W. W., 3045, Oct. 15, Power looms.
- Symonds, T. H., 3296, Nov. 6, Glazing or polishing papers.
- Symons, H. C., 2567, Aug. 29, Sewing-machines, &c.

Synge, M. H., 2227, July 25, Deodorizing.
 — M. H., 2496, Aug. 22, Deodorizing apparatus.
 — M. H., 2683, Sept. 10, Deodorizing apparatus.
 Systemans, O. (Hughes), 3406, Nov. 15, Weighing con-
 [tents of vehicles.]

T.

Taber, J. R. (*Carrao*), 1133, Apr. 16, Artificial breasts.
 Tabor, J., 1888, June 22, Registering packages.
 Tackels C. F. (Piddington), 2662, Sep. 7, Revolving fire-
 [arms.]
 Taft, G. E., & Foss, J. F. (Johnson), 1345, May 3, Carding.
 Tall, J., 3444, Nov. 18, Floors, &c. of buildings.
 Tandy, G. G., & Dryden, J. A., 648, Mar. 1, Lamps.
 — G. G., & Stroudley, W., 3540, Nov. 25, Lamps.
 Tangye, J., 3724, Dec. 7, Steam-pump expansion gear.
 Tankard, J. M., & Ramsden, J. C., 3616, Nov. 30, Staining
 [velvets, &c.]
 — J. M., & Ramsden, J. C., 3620, Dec. 2, Staining
 [fibres.]
 Tanner, B., 2974, Oct. 9, Artificial manures.
 — G. W., 3189, Oct. 26, Cigars.
 Tanner, G. W. (Haseltine), 2329, Aug. 3, Cigars.
 Tannett, J., Scott, J., Craven, J., & Fox, S., 660, Mar. 2,
 [Boring shaft couplings, &c.]
 Tapp, C., 2634, Sep. 4, Bottle stoppers.
 Tappin, J. W., & Gottsberger, W. S. (Ollard & Barrow),
 [1647, May 31, Playing cards.]
 Target, F. N., 3378, Nov. 13, Preserving food.
 — J. L. F., 3215, Oct. 30, Separating excreta in
 [closets.]
 — J. L. F., 3821, Dec. 17, Receiver and disinfector
 [for privies, &c.]
 Tate, G. A., 1787, June 13, Millstones.
 Tatham, B., & Brittin, J. W. (Eddison), 2174, July 20,
 [Platform lifts.]
 Tattersall, F., & Easton, W., 2086, July 10, Air compressing
 [engines.]
 — F., & Easton, W., 3624, Dec. 2, Ventilating.
 Taunton, R. H., 3859, Dec. 19, Tubular steam-boilers.
 Taylor, A., 1904, June 24, Bleaching yarns and cloth.
 — A. W., & Cardoso, H. G., 866, Mar. 22, Check-
 [ing receipt of money.]
 Taylor, De W. C., & Gravenstine, J. (Johnson), 420,
 [Feb. 9, Refrigerating.]
 — De W. C., & Mills, W. J. B. (Lake), 500, Feb. 16,
 [Boots and shoes.]
 — De W. C. & Mills, W. J. B. (Johnson), 1470,
 [May 14, Shoes.]
 Taylor, Edward, & Thomas, W. E., 795, Mar. 15, Fixing
 [rollers on to axles of machines.]
 — Edwin, 2813, Sep. 24, Stuffing for beds, &c.
 — Edwin, 3580, Nov. 28, Shirt-collars.
 — F., 394, Feb. 7, Invalid bedsteads.
 — F. F., & Larkin, H. W., 533, Feb. 19, Safety car
 [coupling.]
 — G. E., & Wilkinson, W., 3723, Dec. 7, Casting
 [metals.]
 Taylor, G. L. & Holland, D. (Lake), 1575, May 23,
 [Stoning raisins, &c.]
 Taylor, H. & T., Warburton, H., & Wadsworth, W., 3922,
 [Dec. 27, Combing fibres.]
 — J., 2777, Sept. 19, Steam generators.
 — J., & Calvert, J. C., 350, Feb. 3, Heating water,
 [steam, &c.]
 — M., 1809, June 15, Looms and pickers.
 Taylor, N. W., & Brightman, J. W. (Lake), 968, Apr. 2,
 [Paper rag engines.]
 — Rees, 3655, Dec. 4, Furnaces.
 — Robert, & Duckers, M., 3036, Oct. 15, Looms.

Taylor, R. M., 504, Feb. 16, Caster runners, door
 [knobs, &c.]
 — R. Smith, 3725, Dec. 7, Ventilating mines.
 — R. Stephens (*Waterton*), 3885, Nov. 13, Ships.
 — T., 687, Mar. 6, Turning bowling-green bowls.
 — T. & H., Warburton, H., & Wadsworth, W.,
 [3922, Dec. 27, Combing fibres.]
 — W., 240, Jan. 24, Registering condition of iron
 [ships, &c.]
 — W., 667, Mar. 4, Cap bars; lubricating spinning
 [rollers.]
 — W. S., 1832, June 18, Tramway engines and
 [carriages, &c.]
 Teal, J. H., 1190, Apr. 20, Controlling, &c. the packing
 [of pistons in motion.]
 Teale, W. E., 3652, Dec. 4, Gas light guards; lighting gas.
 Tebbutt, J., 3315, Nov. 8, Elastic fabric.
 Teer, J., 3243, Nov. 1, Generating steam; consuming
 [smoke.]
 Telfer, J. A., 1030, Apr. 6, Borders and edgings for tables
 [for playing billiards, &c.]
 Telford, R., 1810, June 15, Furniture casters.
 — T., 1718, June 7, Bases and other brooms.
 Tellier, C. (Dufrené), 228, Jan. 24, Refrigerating.
 Temple, C., & Sargent, C., 690, Mar. 6, Steering ap-
 [paratus.]
 — C. J., & Danter, R. S. (*Osborn*), 816, Mar. 18,
 [Pipe joints.]
 Tenwick, J., 3401, Nov. 15, Ship's anchors.
 Tergolina, V. Count di, 208, Jan. 23, Bits for horses, &c.
 Terré, A. de, & De Mercader, E. (*Watteen*), 752, Mar. 12,
 [Explosive compounds.]
 Terrell, E. P., Allen, D. B., & Enoch, J. (Lake), 315,
 [Feb. 1, Operating loom shuttles.]
 Tessié du Motay, C. M., 2331, Aug. 5, Purifying cast
 [irons, &c.]
 Tessié du Motay, C. M. (Smith), 2, Jan. 1, Treating lyes
 [in preparing fibres, &c.]
 Teuchert, W. C. (Owen), 3672, Dec. 4, Electric currents.
 Thairiwall, C. W., & Derham, T. S., 1955, June 28,
 [Bricks.]
 Thelwall, W. B., 1192, Apr. 20, Actuating figures for
 [stage purposes.]
 Thom, J., & Stenhouse, J., 2186, July 22, Treating fatty
 [substances.]
 Thomas, A., 217, Jan. 23, Drying.
 Thomas, A. W. (Clark), 1692, June 4, Bustles.
 — D. & J., & Menere, H. W. (Lake), 897, Mar. 23,
 [Mounting and working ordnance.]
 Thomas, F. S., 793, Mar. 15, Roads, ways, and floors.
 — G., 1684, June 4, Cooking apparatus.
 — J., 1886, June 22, Gas and metal furnaces.
 — J., 2575, Aug. 30, Heating steam boilers; ven-
 [tilating ships.]
 — J., 3462, Nov. 20, Telegraph wires.
 Thomas, J. (Lake), 896, Mar. 23, Mounting and working
 [ordnance.]
 — J. & D., & Menere, H. W. (Lake), 897, Mar. 23,
 [Mounting and working ordnance.]
 Thomas, J. J., & Howson, R., 186, Jan. 17, Puddling
 [furnaces.]
 — J. J., & Howson, R., 839, Mar. 20, Puddling
 [furnaces.]
 — N., 1212, Apr. 23, Heating feed water.
 — N., 2313, Aug. 2, Motive-power engines.
 — N., 2314, Aug. 2, Heating feed water; generating
 [steam.]
 — R., 1570, May 22, Coloring lenses.
 — W. E., & Taylor, E., 795, Mar. 15, Fixing rollers
 [on to axles of machines.]
 Thomas-Payen, E. & Roux, H. (Bonneville), 1046, Apr. 9,
 [Treating metals or ores.]

- Thompson, James, 621, Feb. 28, Covers of vegetable [dishes].
 Thompson, John C., & Olson, J. W. (Newton), 1145, [Apr. 17, Distilling].
 Thompson, John W., 3874, Dec. 21, Lining bands for [hats, &c].
 — Joseph, 3594, Nov. 29, Shutters.
 Thompson, N. (Newton), 506, Feb. 16, Lever punches, &c.
 — N. (Newton), 675, Mar. 5, Ordnance.
 — N. (Newton), 854, Mar. 21, Breech-loading [ordnance].
 — N. (Newton), 1864, June 20, Stench-traps, &c.
 — N. (Newton), 3411, Nov. 15, Stench-traps, &c.
 — N. (Newton), 3698, Dec. 6, Pliers.
 — S. R. (Hunt), 512, Feb. 17, Pottery-ware.
 Thompson, W., 3202, Oct. 29, White-lead.
 — W. B., 3487, Nov. 21, Governors.
 — W. H., Harris, E., & French, G., 3522, Nov. 23, [Skates].
 — W. T., 2195, July 23, Ventilating, disinfecting [and deodorizing].
 Thomson, J. & J. M., 2056, July 8, Drilling machine.
 — J. M. & J., 2056, July 8, Drilling machine.
 Thomson, T. (Lake), 32, Jan. 4, Anchors.
 Thomson, T., 2413, Aug. 13, Anchors.
 Thorsdike, J. H., & Sickels, G. (Hunt), 83, Jan. 10, Fluid [meters].
 Thorne, S. (Newton), 1986, July 1, Tilling implements.
 Thorneloe, G., 3534, Nov. 25, Dip pipe for gas apparatus.
 Thornley, T., & Hodgkinson, J., 1317, May 1, Bobbin [and fly frames for preparing fibres].
 Thornton, E., 2778, Sep. 19, Kitchen ranges.
 — J., 2499, Aug. 22, Utilizing iron borings, &c.
 — W., 1059, Apr. 10, Looped or knitted fabrics.
 Thornton, W. McK., & Buckland, T. A. (Edwards), 495, [Feb. 16, Dust shield for railway carriages].
 — W. McK. (Edwards), 1969, June 29, Preventing escape of sparks from chimneys.
 Thorp, T., 3833, Dec. 18, Tap and bush valve.
 Thorpe, J., 342, Feb. 2, Tallies or plant labels.
 — J., 2427, Aug. 15, Ornamenting floor cloths, &c.
 Thwaites, W., Fondeville, E., & Bertin, G., 2003, July 2, [Glaze or coating for stone, &c].
 — W., Fondeville, E., & Bertin, G., 2004, July 2, [Composition for preserving walls, &c].
 Tidcombe, G., 1007, Apr. 5, Cutting paper, &c.
 — G., 3718, Dec. 7, Paper.
 Tiernan, R., 1103, Apr. 13, Treating tobacco.
 Tildesley, M., 1028, Apr. 6, Annealing oven.
 — M., & Barnard, M., 1029, Apr. 6, Door fasteners, [&c].
 Tilghman, B. C. (Newton), 3626, Dec. 2, Cutting, &c. [hard substances].
 Timbrill, R. (Harrison), 390, Feb. 7, Gloves & mittens.
 Timby, T. R. (Mills), 585, Feb. 23, Railway rails or bars.
 Timiriacheff, D., 2161, July 18, Stereotype moulds.
 Tinnis, I. A., 1696, June 5, Tarpaulin.
 Tindal, J., 3710, Dec. 7, Finishing cloth.
 Tingley, J. (Johnson), 914, Mar. 26, Ice-cream freezers.
 Tirrell, J. P., Fletcher, J. W., & Cutler, W. C. (Lake), [2587, Aug. 30, Lighting burners].
 Tissot, J. (Newton), 2466, Aug. 19, Furnaces or fire-places.
 Titley, R., 386, Feb. 6, Louvres and louver blinds.
 Tivoli, V. de (Giacomini), 221, Jan. 23, Brushes and [brooms].
 Todd, B., 2035, July 5, Treating gases and fumes.
 — W., 1974, June 29, Dyeing, sizing, &c. yarn.
 — W., & Winn, D., 351, Feb. 3, Pressing, smoothing, [&c. fabrics].
 Toepler, P., 3, Jan. 1, Treating, &c. materials containing [grease].
 Toft, C., 619, Feb. 28, Cover for hot water jugs, &c.
 — C., 3294, Nov. 6, Suspending lids of dishes, &c.
 Toiray-Maurin, G. (Lauranson), 2479, Aug. 21, Book [and paper binders].
 Toller, A., & Smyth, A., 3711, Dec. 7, Fire-bars.
 Tolson, R., Firth, M., Bradley, C., Smith, B., & Stake, J., [700, Mar. 7, Combing fibres].
 Tombs, E., 493, Feb. 16, Neckties, &c.
 Tomkys, J. L., 258, Jan. 26, Lamps for burning hydro- [carbons].
 Tomlinson, B., 2691, Sep. 11, Corn dressing and blowing [machines].
 Tomlinson, O. (North), 3541, Nov. 26, Railway axle-boxes.
 Tommasi, F., 1738, June 8, Pneumo-hydraulic motor.
 Tonge, R., & Rushton, T. H., 2382, Aug. 9, Spinning [and doubling].
 Tongue, J. G. (Crompton), 956, Apr. 1, Carpets, &c.
 — J. G. (Crompton), 1275, Apr. 27, Carpets, &c.
 — J. G. (Favier), 1946, June 27, Artificial flowers, [fruits, &c].
 — J. G. (Hogel & Bigelow), 2115, July 13, Manures.
 — J. G. (Givry), 2519, Aug. 24, Needle and fancy [boxes, &c].
 — J. G. (Gardère), 2536, Aug. 26, Securing [packing cases].
 — J. G. (Féron), 2819, Sep. 24, Printed threads [and fabrics].
 — W., 1114, Apr. 15, Combing fibres.
 Toninetti, P., & Prada, N., 835, Mar. 19, Preserving sub- [stances].
 Tonkin, W. W., 2045, July 6, Actuating the valves of [engines, &c].
 Toogood, H., & Caselton, C., 1920, June 25, Saw-frames.
 Toone, J. V., & Carson, W. H., 665, Mar. 4, Chaff cut- [ting machines].
 Topham, C., 3634, Dec. 3, Mincing meat, &c.
 Torr, C. W., & Johnstone, J., 2642, Sep. 5, Furnaces.
 Touche, J. J. P. V., 488, Feb. 15, Preventing horses [slipping on roadways].
 Toulouse, E. O. Petit- (Gedge), 1737, June 8, Looms.
 Tourenc, J. (Gedge), 1120, Apr. 15, Raising vessels.
 Tourre, J., 1878, June 21, Obtaining colours from mad- [der, &c].
 Toussaint, J., 3096, Oct. 19, Tinning metals.
 Towle, H. E. (Pratt), 2305, Aug. 1, Turning screw-bolts, &c.
 — H. E., Dodge, W. C., & Welch, J. H., E. P. & R. W., [3373, Nov. 13, Fluid motors].
 Townsend, F., Jackson, G. P., & Blessing, J. H. (Edwards), 1139, Apr. 17, Steam traps.
 Townsend, H. E., 2083, July 10, Ships' standing rigging.
 — J., 1914, June 25, Furnaces.
 Trémaux, J. M., 2966, Oct. 8, Obtaining & storing water.
 — J. M., 3068, Oct. 17, Piston packing.
 Trimmer, W., 912, Mar. 26, Casks.
 Tripler, A. B. (Lake), 1646, May 30, Railway sleepers.
 Triquet, O., & Fourquier, G., 3075, Oct. 18, Umbrellas.
 Triscott, W. R., 3904, Dec. 24, Tobacco pipes.
 Trotman, F., 1411, May 8, Reflectors, &c.
 — F., & Price, G. B., 2611, Sep. 3, Closing, &c. [bottles].
 — F., Turner, W. & Ryves, W. H., 720, Mar. 8, [Closing and opening bottles, &c].
 Trowbridge, C. A. (Hughes), 1652, May 31, Safety-valves.
 Truman, E. T., 482, Feb. 15, Insulating wire, &c.
 Truswell, W., & Holden, R. W., 2477, Aug. 20, Heating [and supplying air to furnaces, &c].
 Tsherikovsky, N. (Kleberg), 1229, Apr. 24, Sugar.
 Tucker, F. Z. (Christy), 2455, Aug. 17, Ventilating [ships, &c].
 Tucker, J. C., 1669, June 3, Paving, &c.
 Tucker, T. M. (Johnson), 310, Jan. 31, Fluting or crimping.
 Tuddenham, S., 3762, Dec. 11, Ornamental metal work.

Tugby, H., 3049, Oct. 16, Kilns for bricks, &c.
 Tullis, J. K., 8, Jan. 1, Punching holes in leather, &c.
 Tully, T. D., & Robinson, J. T., 3467, Nov. 20, Gas and
 [water pipes; extinguishing fire.
 Turnbull, R., 2013, July 3, Raising and lowering ships;
 [pontoonous.
 Turner, A., 2225, July 25, Elastic fabrics.
 — A., 3418, Nov. 16, Elastic fabrics.
 — C., 1654, May 31, Scudding or puring skins.
 — C., 3599, Nov. 29, Removing grease from skins, &c.
 — E., 1875, June 21, Door springs.
 — E. J., & Ferranti, C., 3069, Oct. 17, Photographs.
 — H., 1396, May 7, Applying wire for building, &c.
 — J. A., & Davies, G., 1512, May 18, Waterproof
 [packing.
 — J. O., & Parlin, C. E. (Ryerson), 3295, Nov. 6,
 [Boot heel.
 — R., Hibbert, J., & Cheetham, J., 2352, Aug. 7, Hats.
 Turner, R. D. & Vanderpool, I. (Newton), 1905, June 24,
 [Vinegar; acidulating liquids.
 Turner, S. S., & Comey, W., 1927, June 26, Loom stop
 [motions.
 — W., 2226, July 25, Levels.
 — W., & Pridmore, J., 2905, Oct. 2, Carding engines.
 — W., & Ryves, W. H., & Trotman, F., 720, Mar. 8,
 [Closing and opening bottles, &c.
 Turney, G. L., 1838, June 18, Boxes for pins, pens, &c.
 — G. L., 3305, Nov. 7, Boxes.
 Turton, G., 2678, Sep. 10, Heating liquids in baths, &c.
 — T., 1871, May 6, Spring safety-valves.
 Tweedale, E., 3967, Dec. 31, Flyers for roving frames, &c.
 Tylor, A., 2292, July 31, Regulating water supply to
 [closets, &c.
 — A., & Fleury, F. G., 523, Feb. 17, Regulating flow
 [of liquids, &c.
 — A., & Fleury, F. G., 1180, Apr. 20, Water-waste
 [preventers.
 — A., & Fleury, F. G., 1391, May 7, Measuring and
 [recording flow of liquids, &c.
 Type-setting Company, Westcott (Lake), 2111, July 12,
 [Making and composing type.

U.

Uhry, H., 2026, July 4, Locomotive engines.
 Ulmann, G. H. (Brooks), 3314, Nov. 8, Music stools,
 [seats, &c.
 Umbers, E., & Fenn, A. G., 2039, July 5, Railway
 [signalling.
 Underhay, F. G., 670, Mar. 5, Controlling water supply
 [to buildings.
 — F. G., 3038, Oct. 15, Water-waste preventers.
 Underwood, G., & Owen, E. L., 2109, July 12, Purifying gas.
 Ungerer, A., 257, Jan. 26, Preparing plants for pulp.
 — A., 2985, Oct. 10, Evaporating liquids.
 Unwin, E., & Ovens, G., 1839, June 18, Delivering sheets
 [from printing machines, &c.
 Ure, J. M., 3475, Nov. 21, Measuring taps.
 Urquhart, D. (Monteith), 837, Mar. 19, Preserving sub-
 [stances.
 Urquhart, W. W., & Lindsay, J., 3636, Dec. 18, Woven
 [fabrics.
 Utsch, J. F. (Green), 2412, Aug. 13, Washing ores, &c.

V.

Vacherot, I. A., 3707, Dec. 7, Propelling vessels.
 — I. A., 3899, Dec. 24, Propelling and steering ships.
 Vagnolini, R., 3806, Dec. 16, Motive-power.

Vale, H., 72, Jan. 9, Frames of eye protectors.
 — W., 360, Feb. 5, Watch keys.
 Vallet, L., 3828, Dec. 17, Bottles and stoppers.
 Valleton, J. H., & Planque, J. E., 2783, Sep. 19, Bread,
 [biscuits and pastry.
 Van Baerle, V., 1851, June 19, Soap, &c.
 Van Choate, S. F., 3474, Nov. 21, Telegraphing.
 Vanderpool, I., & Turner, R. D. (Newton), 1905, June 24,
 [Vinegar; acidulating liquids.
 Van de Waal, W., 2710, Sep. 12, Stays and corsets.
 Vanel, S. T., 606, Feb. 26, Waterproofing linen, paper, &c.
 Vansteenkiste, A., Dugdale, A., & Mingrat, J., 1682,
 [June 4, Cocks.
 Varela, R., 3097, Oct. 19, Propelling vessels; working
 [pumps.
 Varlet, —, & Marté, J. B. (Smith), 442, Feb. 12, Card-
 [ing engines.
 Varnaison, P., 2508, Aug. 23, Night carts.
 Vaughan, E. P. H. (Franklin), 1902, June 24, Supplying
 [air to furnaces, stoves, &c.
 — E. P. H. (Pernot), 2046, July 6, Utilizing
 [waste furnace gases.
 — E. P. H. (Striedter), 2277, July 30, Phosphates
 [of lime.
 — E. P. H. (Dubois), 3192, Oct. 28, Gas.
 — E. P. H. (Ripamonti & Ripamonti), 3360,
 [Nov. 12, Mariner's compass.
 — E. P. H. (Daguin), 3432, Nov. 18, Drawing
 [pens.
 Vavasseur, J., 2025, July 4, Ordnance.
 Veillon, A. (Greenwood), 1716, June 6, Screw gill ma-
 [chinery.
 Veitch, R., 2865, Sep. 28, Curing corns.
 Venables, C. S., 1132, Apr. 16, Pianofortes.
 Venman, H., & Warne, C. J., 3944, Dec. 28, Flexible
 [type, inking pads, and rollers.
 Verbert, E., & Daudenart, L. G. G. (Hughes), 2745,
 [Sep. 16, Baryta and strontia.
 — E., & Daudenart, L. G. G. (Hughes), 2746,
 [Sep. 16, Treating greasy and washing liquors, &c.
 Verdreaux, C., & Barret, P. (Johnson), 1121, Apr. 15,
 [Files, rasps, &c.
 Vernier, P. C. F. J., Droulers- (Mewburn), 511, Feb. 17
 [Hackling-machines.
 Vernon, C., Holden, E., Lones, J. C. & J., 3884, Dec. 21,
 [Carriage axles.
 — H. A., 335, Feb. 2, Working field guns.
 Verrier, A. B., 3375, Nov. 13, Stoves, kitcheners, &c.
 Vezzoli, V. (Ré), 3405, Nov. 15, Horse-shoes.
 Viard, C. V. (Clark), 2403, Aug. 12, Medicinal compound.
 Vick, C. W., & Cooke, J., 1242, Apr. 25, Feeding carding
 [engines, &c.
 Viehoff, C. J., & Voss, E., 2151, July 18, Ventilating.
 Viel, C., 1375, May 6, Washing fluids.
 Viger, L. La B. (Bossé), 243, Jan. 25, Cast steel.
 Vigneau, P. A. (Gedge), 1119, Apr. 15, Boots & shoes.
 — P. A. (Gedge), 3021, Oct. 14, Boots & shoes.
 Vigour, H. (Gedge), 587, Feb. 23, Rolling mills.
 Vigoureux, S., 1340, May 3, Forming threads and pro-
 [ducing fabrics therefrom.
 Vigoureux, S. (Smith), 3145, Oct. 24, Threads; fabrics.
 Viles, J., 3663, Dec. 4, Glove for polishing plate, &c.
 Villain, J., & Lefauve, E. (Lake), 3204, Oct. 29, Fire-
 [arms.
 Ville, G. (Abel), 958, Apr. 1, Superphosphate of lime.
 Vincent, A. J., & LeBlanc, J. A. (Brewer), 2925, Oct. 3,
 [Stamping rivets, bolts, &c.
 Vincent, D., 1707, June 5, Distributing liquid in gas
 [scrubbers.
 — W., 2510, Aug. 23, Gas.
 Vincenzi, E., & Gaillard, J. J. & E. (Clark), 2898, Oct. 1,
 [Punching jacquard cards.

Vine, J. & J., Brown, J., & Skinner, J. A., 2010, July
[3, Fire-arms.
Vinter, J. M., 3122, Oct. 22, Diving bells and dresses.
Vitali, P. (Johnson), 948, Mar. 30, Railways.
Vivian, J., & Mackenzie, H. S., 2217, July 25, Screw
[propulsion.
— J., & Mackenzie, H. S., 3251, Nov. 2, Weighing
[and strain testing.
Vogan, J., 2060, July 8, Raising or elevating corn, &c.
Vokins, W., & Barnett, J., 797, Mar. 16, Economizing fuel.
— W., & Barnett, J., 798, Mar. 16, Furnaces.
Volk, M., 2250, July 27, Turning over music leaves.
Von Hennings, C., 3628, Dec. 2, Extract from mountain
[ash berries.
Von Horn, L. (Pelly), 3330, Nov. 9, Peat fuel.
Von Schellin, Col. (Wellesley), 3536, Nov. 25, Torpedoes.
Von Sparre, J. (Prince), 2059, July 8, Boring instrument.
Vose, J. (Lake), 3043, Oct. 15, Chairs.
Voss, E., & Viehoff, C. J., 2151, July 18, Ventilating.
Voy, J. C. de (Lake), 2342, Aug. 6, Ink-erasing compound.
Freeland, O. S. (Johnson), 3947, Dec. 30, Wheels for
[vehicles.

W.

Waal, W. Van de, 2710, Sep. 12, Stays and corsets.
Waddington, J., & Garside, W., 1484, May 15, Grate bars.
Wade, A., & Parker, J. F., 2528, Aug. 26, Hydrocarbon
[gas, &c.
— J., 2124, July 13, Printing machines.
— J., 3872, Dec. 20, Printing machines.
Wadsworth, J., 2927, Oct. 4, Wire fastenings for dress, &c.
— W., Taylor, H. & T., & Warburton, H., 3922,
[Dec. 27, Combing fibres.
Wagner, C. W. F., & Schüssler, C. F., 333, Feb. 2, Motive-
[power.
— H. E., 3437, Nov. 18, Paper and parchment.
Waide, F. W., 3366, Nov. 12, Water-waste preventers.
— F. W., Morgan, J. C., & Macaulay, H., 3439,
[Nov. 18, Water-waste preventers.
Waite, S. T., White, J. J., & Wise, J. O., 1872, June 21,
[Fire-lighters.
Walch, O., 471, Feb. 14, Matches.
Walker, B. & N., 957, Apr. 1, Mixed woollen and felted
[fabrics.
— B. & N., 3184, Oct. 26, Woollen union and
[worsted cloth.
Walker, B. L., & Barlow, W. H. (Newton), 2700, Sep. 11,
[Mowing machines.
Walker, E., & Clarke, W., 3050, Oct. 16, Retarding, &c.
[travel of ropes and chains; lifting apparatus.
— G., 196, Jan. 22, Coarse textile fabrics.
— H., 445, Feb. 12, Fire-arms.
— H. (Sugden), 166, Jan. 18, Cotton-gins.
— H. (Rainbow), 2216, July 25, Railway signals.
— H. A., 2723, Sep. 13, Checking receipt of money.
— John, 2206, July 24, Raising & reducing ores, &c.
— John, & Ragon, A. E., 1288, Apr. 30, Fireproof
[buildings, bridges, &c.
— John E., & Cole, J. W., 1365, May 4, Screening
[coals.
— Joseph, & Bell, A., 502, Feb. 16, Distilling,
[brewing, &c.
— N. & B., 957, Apr. 1, Mixed woollen and felted
[fabrics.
— N. & B., 3184, Oct. 26, Woollen union & worsted
[cloth.
— N. S., 1653, May 31, Metallic bale-tie.
— R., 3093, Oct. 19, Applying gases for generating
[steam, &c.

Walker, T., 3256, Nov. 2, Fastenings for scarfs, &c.
— W., & Williamson, T., 3912, Dec. 24, Steam-
[engines.
— W., 331, Feb. 2, Mill-bands, ropes, cordage, &c.
— W., 613, Feb. 26, Packing for stuffing boxes.
— W., Robson, J., & Hudson, T., 2348, Aug. 7,
[Sheathing for ships.
— W., 3140, Oct. 23, Stoves.
— W. G., 272, Jan. 29, Preserving food.
Wallace, D. (Boyd), 1830, June 18, Projectiles.
Wallace, J., 634, Feb. 29, Burning gas to produce heat.
— J., 1999, July 2, Gas stoves and burners.
Wallis, A. G., & Bradshaw, W., 594, Feb. 24, Cocoa fibre
[mats.
— C. E., 1605, May 27, Revolving fire-arms.
— S. J., 1917, June 25, Guns.
Walmsley, J., & Gillibrand, R. T., 1958, June 28, Piecing
[yarn for weaving.
Walter, K. (Newton), 3142, Oct. 23, Furnaces.
Walton, F., 2620, Sep. 3, Linoleum floor-cloth.
— F., 2845, Sep. 26, Oxidizing oil.
— F., & Jones, J., 1607, May 27, Nuts for screw
[bolts.
Walton, J. J. (Lake), 2067, July 9, Extinguishing fires.
Walton, W., 176, Jan. 19, Carding engine rollers.
— W., 259, Jan. 26, Wire-cards.
— W., 892, Mar. 23, Sash-fasteners.
— W., 1105, Apr. 13, Wire-cards.
— W., 1972, June 29, Window sash fastener;
[ventilating.
— W., 2605, Sep. 2, Spinning and doubling.
— W., & Fallows, J. T., 1008, Apr. 5, Rolling wire.
Wanklyn, J. A., 3261, Nov. 2, Oxygen gas.
Waplington, W., & Barker, G. E., 323, Feb. 1, Spiegeleisen.
Wappenstein, R., 2810, Sep. 23, Registering and indi-
[cating apparatus.
Warbrick, J. F., & Clegg, J., 999, Apr. 4, Registering
[apparatus.
Warburton, H., Wadsworth, W., Taylor, H. & T., 3922,
[Dec. 27, Combing fibres.
— J., 796, Mar. 15, Cork fasteners.
Ward, E., 486, Feb. 15, Vesuvians or fuzees.
— E. L., 3532, Nov. 25, Tobacco pipe.
— J., 289, Jan. 31, Securing earrings to the ears.
Ward, J. F. (Johnson), 3386, Nov. 13, Pipe-joints.
Ward, J. W., & Rouse, J. C., 1942, June 27, Jacquard
[apparatus.
— S., 3850, Dec. 18, Seaming, &c. hosiery goods.
— T. H., 2040, July 5, Pulley blocks.
— W. M., & Lewis, G. B., 1449, May 13, Fishing
[and other nets.
Wardroper, A., 3578, Nov. 28, Umbrellas and sunshades.
Wardwell, S. W. (Lake), 2200, July 23, Sewing-machines.
Waring, F. & W., & Bradley, C., 678, Mar. 5, Combing
[fibres.
Waring, J. B., & Rand, A. C. (Johnson), 3125, Oct. 23,
[Rock boring or drilling.
Waring, W., Garnett, W. T., & Wheeler, J., 3906, Dec. 24,
[Combing fibres.
— W. & F., & Bradley, C., 678, Mar. 5, Combing
[fibres.
Warlich, F. H., 454, Feb. 13, Artificial fuel.
Warne, C. J., & Venman, H., 3944, Dec. 28, Flexible
[type, inking pads, and rollers.
Warneck, L. C., 2177, July 20, Screw-propellers.
Warner, A., 189, Jan. 20, Iron and steel.
Ward, W., & Mitchel, W., 2100, July 11, Stacking
[hay, &c.
Warren, F. P., 113, Jan. 13, Preserved meat canisters.
— J. B., & Eyland, E. S., 3112, Oct. 22, Construc-
[ting and working railways.
— T., 2358, Aug. 8, Glass furnaces.

- Warrington, T. A., Brydon, R., & Davidson, J. S., 3507, [Nov. 23, Boring rock, &c.]
 — T. A., Brydon, R., & Davidson, J. S., 3921, [Dec. 26, Drilling rock, &c.]
- Warry, H., 1162, Apr. 18, Beverages.
 — R., 2513, Aug. 23, Portable cooking stoves.
- Warth, A., & Jobbins, W. F. (Lake), 536, Feb. 19, [Cutting fabrics, &c.]
 — A., & Jobbins, W. F. (Bonneville), 2517, Aug. 24, [Cutting textile materials.]
- Washburn, N., 620, Feb. 28, Wheels for railway carriages.
- Wassall, C., 2802, Sep. 23, Dress suspender.
- Waterton, E. (Taylor), 3385, Nov. 13, Ships.
- Watson, W. R., 2904, Oct. 2, Treating fibrous plants.
- Watt, J., & Moore, A., 2257, July 29, Heating and forcing [liquids.]
 — J. C., & Bennett, W. B. G., 2276, July 30, Asphalt.
 Watteu, E. (De Terré & De Mercader), 752, Mar. 12, [Explosive compounds.]
 — E. (Francois & Dubois), 1398, May 7, Driving [holes in rocks.]
- Way, D. T., & Lewis, W. (Benson), 1258, Apr. 27, [Stockings for horses.]
- Waygood, R., 97, Jan. 11, Extinguishing fire.
 — R., 1358, May 4, Engine governors and valves.
- Weatherdon, B. F. (Palliser, McDowell, Klopsh, & Grumel), 3231, Oct. 31, Bleaching fabrics, &c.
- Weaver, G. E., & Mot, A. (Lake), 734, Mar. 9, Propelling vessels and machinery.
- Webb, A. E., 1225, Apr. 24, Destroying labels on bottles, &c.
 — A. E., 2770, Sep. 18, Rendering disinfecting oils, [spirits, &c.]
 — G., 2080, July 10, Coverings for horses.
- Webster, A. W., & Hendryx, A. B. (Hughes), 869, [Mar. 22, Converting motion.]
- Webster, J., 1027, Apr. 6, Iron and steel; recovering [gases.]
- Webster, W., & Meserole, C. M. (Newton), 344, Feb. 2, [Terry and cut-pile carpets, &c.]
- Weed, A. (Brandon), 628, Feb. 28, Cutting files.
 — J. R. (Lake), 2369, Aug. 9, Nutritious compounds.
- Weekes, C., 599, Feb. 26, Carriages.
 — C., 2228, July 26, Cartridges.
- Weeks, J. W., 141, Jan. 17, Anti-corrosive composition.
- Weems, J., 3254, Nov. 2, Gas meters and generators.
- Wehrlin, E. (Hunt), 1903, June 24, Clipping animals.
- Weibel, J. H., 1462, May 14, Warming railway carriages.
- Weir, G. & J., 262, Jan. 26, Steam-boilers.
 — G. & J., 1773, June 12, Safety and other valves.
 — J., 3436, Nov. 18, Safety-valves.
 — J. & G., 262, Jan. 26, Steam-boilers.
 — J. & G., 1773, June 12, Safety and other valves.
 — J. G., 580, Feb. 23, Sewing machines and needles.
- Welch, E. J. C., 2763, Sep. 18, Straining & winding wire.
- Welch, E. P., R. W., & J. H., Dodge, W. C., & Towle, H. E., [3373, Nov. 13, Fluid motors.]
 — J. H., E. P., & R. W., Dodge, W. C., & Towle, H. E., [3373, Nov. 13, Fluid motors.]
 — R. W., J. H., & E. P., Dodge, W. C., & Towle, H. E., [3373, Nov. 13, Fluid motors.]
- Weldon, W., 317, Feb. 1, Chlorine.
 — W., 359, Feb. 5, Sulphates of sodium, &c., hydrochloric acid and chlorine.
 — W., 602, Feb. 26, Treating, &c., dilute chlorine.
 — W., 1539, May 21, Soda, potash, hydrochloric acid [and chlorine.]
 — W., 2044, July 6, Utilizing dilute chlorine.
- Wellesley, Hon. F. A. (Von Scheliha), 3536, Nov. 25, [Torpedoes.]
- Wellinghoff M., & Rabien, H. (Clark), 1913, June 24, [Rudder and drag for vessels.]
- Wells, B. W., 1988, July 1, Floor-cloth, &c.
- Wells, G. M. (Johnson), 1382, May 6, Treating grain.
 — G. M. (Johnson), 1800, June 14, Seasoning [wood.]
 — J. L., & Zell, T. E. (Hunt), 2915, Oct. 3, Printing and ornamenting.
- Wells, S. J., 2724, Sep. 13, Shirts.
- Welter, E. (Gedge), 433, Feb. 10, Horizontal boilers.
- Welton, T., 3823, Dec. 17, Applying magnets to dress [or jewellery.]
- Wenham, F. H., 1640, May 30, Glasses for microscopes.
- Wentworth, S. T., 1673, June 3, Gas and air burners.
- Werner, J., 1865, Mar. 21, Substitute for "brewers' pitch."
- Wernz, J. (Hughes), 2423, Aug. 14, Sifting machine.
- Wessman, M. F. (Morgan-Brown), 2081, July 10, Unison [stop for printing telegraphs.]
- West, D. K. & W., 3402, Nov. 15, Pressing cotton, [securing bales, &c.]
 — G. W. (Du Bois), 2410, Aug. 13, Ginning cotton.
 — J., 591, Feb. 23, Looms.
- West, J. B. (Lake), 1408, May 8, Compressing metallic [articles.]
- West, T., 3562, Nov. 27, Equilibrium steam-valve.
 — Walter & D. K., 3402, Nov. 15, Pressing cotton; [securing bales, &c.]
 — William, 2722, Sep. 13, Fastening wearing apparel.
- Westcott Type-setting Company (Lake), 2111, July 12, [Making and composing type.]
- Westinghouse, G., 595, Feb. 24, Working railway brakes [and signalling.]
 — G., 933, Mar. 28, Working brakes; signalling in trains.
 — G., 1226, Apr. 24, Working railway brakes.
 — G., 1572, May 23, Slide valves.
 — G., 1691, June 4, Working brakes and [signalling by compressed air.]
 — G., 2018, July 4, Railway brakes.
- Westley, J., & Bailey, W. H., 2709, Sep. 12, Lubricators.
- Weston, E. (Lake), 3004, Oct. 11, Steam generators.
 — E. R., & McDonald, T. (Lake), 2684, Sep. 10, [Burnishing photographs, &c.]
- Weston, J. H., 3708, Dec. 7, Vent pegs.
 — T. A., 1776, June 12, Differential pulleys, &c.
 — T. A., 2494, Aug. 22, Friction clutches, &c.
- Wetton, C. E., 3492, Nov. 22, Magneto-therapeutic appliances.
- Weyde, H. V. (Clark), 149, Jan. 17, Colouring photographs, &c.
 — H. V., & Sarony, O. (Smith), 641, Mar. 1, Colouring photographs, &c.
- Whateley, C. F., 1250, Apr. 26, Lamps.
- Wheater, J., Waring, W., & Garnett, W. T., 3906, Dec. 24, [Combing fibres.]
- Wheatstone, Sir C., & Stroh, J. M. A., 39, Jan. 4, Musical [instruments.]
 — Sir C., & Stroh, J. M. A., 473, Feb. 15, Telegraphs, &c.
- Wheeler, E. (Johnson), 3130, Oct. 23, Metal tubes & bars.
- Wheeler, J. A., & Martin, J., 3066, Oct. 17, Raising and [tilting casks.]
- Wheelhouse, T., 2807, Sept. 23, Treating hides.
- Whinyates, J. W., 1490, May 16, Propelling and steering [ships.]
- Whipple, L. W. & M. D. (Johnson), 657, Mar. 2, Nails.
 — M. D. & L. W. (Johnson), 657, Mar. 2, Nails.
- Whitaker, G., & Ashworth, J., 1933, June 26, Preparing [fibres for carding.]
- White, B., & Hendry, P. T. (Hale), 3930, Dec. 27, Liquid [for illuminating.]
- White, E. (Spencer), 2576, Aug. 30, Purifying gas.
- White, E. J., & Lambert, T., 1836, June 18, Watercocks.
 — G. (Griffin & Maquin), 703, Mar. 7, Weaving [shuttles.]

- White, G. (*Durst-Wild, frères*), 1793, June 14, Hats, [bonnets, &c.]
 — John, & Lee, J. D., 3311, Nov. 8, Ships & vessels.
 White, John C. (Hunt), 572, Feb. 22, Leather.
 White, Joseph, 3549, Nov. 26, Pistons.
 — Joseph J., Waite, S. T., & Wise, J. O., 1872, June 21, [Fire-lighters.]
 — P. P., & Sissons, W., 1918, June 25, Pile-driving.
 — T., 1104, Apr. 13, Nut and lobster crackers.
 — T., 1765, June 11, Nut and lobster crackers.
 — T., 1978, July 1, Substitute for leather.
 — T., 3394, Nov. 14, Ships, railway carriages, &c.
 — W., Larkin, H., & Leighton, A., 1062, Apr. 10, [Iron and steel.]
 — W., Larkin, H., & Leighton, A., 2964, Oct. 8, [Iron and steel.]
 Whitehall, E., 3855, Dec. 19, Uniting looped fabrics.
 Whitehead, H. W., 23, Jan. 3, Combing fibres.
 — H. W., 3383, Nov. 13, Barring fibres.
 — H. W., 3918, Dec. 24, Combing fibres.
 — T., 2285, July 30, Combing fibres.
 Whitehill, R. (Newton), 2759, Sep. 17, Driving sewing-machines, &c.
 — R. (Newton), 3143, Oct. 23, Sewing-machines.
 Whitehouse, E. O. W., & Phillips, S. E., 3016, Oct. 12, [Recording fares in public vehicles.]
 Whitham, S., 582, Feb. 23, File for bloom for weldless tyres.
 Whiting, C., 1639, May 30, Tables.
 Whittaker, G., 132, Jan. 16, Damping fabrics.
 Whittemore, D., & Landfear, W. R., 2311, Aug. 2, Pegging [boots and shoes.]
 Whitthread, W., & Prange, F. G., 379, Feb. 6, Treating [sewage.]
 Whittingham, J., 215, Jan. 23, Road rolling engines.
 — J., 3610, Nov. 30, Drying & cleaning grain.
 Whittle, Walker, 2901, Oct. 2, Boilers.
 — William, 993, Apr. 4, Nails and spikes.
 Whitwell, T., 171, Jan. 19, Heating air and gases.
 Whitworth, Sir J., 782, Mar. 14, Wheels for railways [and roads.]
 — Sir J., 1298, Apr. 30, Gun-carriages.
 — J., 2581, Aug. 30, Applying paste, &c. to [spindles.]
 Whyte, W., 845, Mar. 20, Boilers for bleaching, &c.
 Wibberley, J. T., 2760, Sep. 18, Winding threads, &c.
 Wier, M. A., 711, Mar. 8, Transmitting, &c. signals.
 — M. A., 2145, July 17, Turnstiles for omnibuses, &c.
 Wiggin, J. E. (Mawhinney), 1403, May 8, Eyeletting [machines.]
 Wigham, J. R., 1015, Apr. 5, Illuminating lighthouses, &c.
 Wightman, J. B. (Bonneville), 2553, Aug. 28, Perambulators.
 Wigner, G. W., & Williamson, J., 738, Mar. 11, Dry [closets and commodes.]
 Wigzell, M., 298, Jan. 31, Drawing board.
 Wilbaur, A., 1406, May 8, Printing surfaces for paper [hangings, &c.]
 Wilbaur, A. A. (Hughes), 2833, Sep. 25, Printing, im- [pressing, or enamelling on paper, &c.]
 Wilcke, H. W., 3209, Oct. 30, Safety-valves.
 Wild, *Durst, frères* (White), 1793, June 14, Hats, [bonnets, &c.]
 Wild, M., & Hawksley, G. W., 3207, Oct. 30, Safety-valves.
 — W. C., & Nourick, A., 22, Jan. 3, Heightening [colour of gems, &c.]
 Wilde, J., & Fox, H. B., 915, Mar. 26, Weeding lawns.
 Wiley, W. E., 2851, Sep. 27, Metallic pens and holders.
 Wilke, F. H., 3301, Nov. 7, Power-looms.
 Wilkes, W., 2117, July 18, Lock for railway carriages.
 Wilkins, J., & Price, J., 2877, Sep. 30, Drawing wire.
 — J. B. & N., & Cogswell, E., 3345, Nov. 11, [Fulling.]
 Wilkins, N. & J. B., & Cogswell, E., 3345, Nov. 11, [Fulling.]
 Wilkinson, F., 2698, Sep. 11, Washing wool, &c.
 — F., 3703, Dec. 6, Sizing and colouring yarns, &c.
 — J., Fillingham, S., & Pardoe, J., 2961, Oct. 8, [Scouring, &c. yarns.]
 — J., Fillingham, S., Pardoe, J., & Glover, W., [3597, Nov. 29, Scouring, preparing, &c. yarns.]
 — S. W., 371, Feb. 5, Winding and balling yarn.
 — W., & Taylor, G. E., 3723, Dec. 7, Casting [metals.]
 — W. H. (James), 1496, May 16, Time-keepers.
 Willans, J. W., & Smith, S. B., 1876, June 21, Smelting [ores and re-heating metals.]
 Williams, G. A., 515, Feb. 17, Outside sun blinds.
 — J. A. B., 303, Jan. 31, Stoves for drying fuel.
 — J. G., 2395, Aug. 12, Brewing and distilling [apparatus.]
 — J. R., 3272, Nov. 4, Cements.
 — T., 3919, Dec. 26, Fire bricks, retorts, crucibles, [linings, &c.]
 — T., & Stephens, S. H., 1194, Apr. 20, Reducing [tin stuff, &c.]
 Williamson, G. & W. H., 497, Feb. 16, Wheels.
 — J., & Wigner, G. W., 738, Mar. 11, Dry [closets and commodes.]
 — R., & Dale, J., 3939, Dec. 28, Salt.
 — T., & Walker, W., 3912, Dec. 24, Steam- [engines.]
 — W., 1045, Apr. 9, Washing and wringing.
 — W. B., 3865, Dec. 20, Cases or holders for [meats, &c.]
 — W. B., & Hitchin, E., 2465, Aug. 19, Fasten- [ings for boxes, &c.]
 — W. H. & G., 497, Feb. 16, Wheels.
 Willis, R., 2374, Aug. 9, Clipping animals.
 Willoughby, J., S. & W., 403, Feb. 7, Steam-stamps.
 — S., W. & J., 403, Feb. 7, Steam-stamps.
 — W., J. & S., 403, Feb. 7, Steam-stamps.
 Wills, J. A., & Kingsland, L. S. (Clark), 609, Feb. 26, [Horse-shoe nails.]
 Willsher, J. C., 3721, Dec. 7, Thrashing machines.
 Wilson Sewing Machine Co. (Johnson), 2441, Aug. 15, [Sewing-machines.]
 Wilson, A. F. (Bennett), 2101, July 12, Lighting and [extinguishing lamps, &c.]
 — C. F., & Folk, J. E. (Clark), 2882, Sep. 30, [Bearings for spindles, &c.]
 — C. F., & Folk, J. E. (Clark), 3629, Dec. 2, [Spindle bolsters.]
 Wilson, C. G., 1472, May 15, Ordure road cleaner.
 Wilson, G. (Eacott), 1759, June 11, Advertizing.
 — G. F. (Johnson), 1302, Apr. 30, Steel.
 Wilson, G. H., 129, Jan. 16, Fire-arms.
 Wilson, Joel (Bousfield), 2263, July 29, Furnaces.
 Wilson, Joseph, & Lendrum, G., 638, Feb. 29, Finishing [cloth.]
 — N., 3053, Oct. 16, Sewing-machines.
 Wilson, P., Hunter, J., Heyes, G., & Entwistle, T., 2400, [Aug. 12, Warping machines.]
 Wilson, R., 1174, Apr. 19, Hydraulic apparatus.
 — R., 2977, Oct. 10, Sweeping chimneys, &c.
 — T. McM., 446, Feb. 12, Refining oils.
 — W., 1093, Apr. 12, Kitchen boilers.
 — W. A., Duncan, G., & Lauder, G., 3834, Dec. 18, [Stereotypes.]
 — W. P., 3347, Nov. 11, Furnaces for gas [making, &c.]
 Wimpey, A. B., 1023, Apr. 6, Smoothing irons.
 Window, F. R., 840, Mar. 20, Taking silhouette pictures.
 Winn, D., & Todd, W., 351, Feb. 3, Pressing, smoothing, [&c. fabrics.]

Winne, J. & J. R., 3249, Nov. 2, Corrugating zinc plate.
 — J. R. & J., 3249, Nov. 2, Corrugating zinc plate.
 Waddington, J., & Saxby, F. E., 1037, Apr. 8, Regulating [supply of fibres to machinery].
 Winram, G., 1068, Apr. 11, Mattresses and seatings.
 Winskill, J., 2495, Aug. 22, Lime kilns.
 Winslow, C. (Hughes), 3424, Nov. 16, Goring for boots.
 Winter, G. K., 3701, Dec. 6, Electric telegraphs.
 — T., 2562, Aug. 28, Fire-escapes.
 Wise, J. O., Waite, S. T., & White, J. J., 1872, June 21, [Fire-lighters].
 — W. L., (Huebscher), 1374, May 6, Musical instru-
 [ments].
 Withy, E., & Gibson, W., 2672, Sep. 9, Puddling fur-
 [naces, &c].
 — E., & Gibson, W., 3252, Nov. 2, Mixing, smelting,
 [&c. ores].
 Witty, J., 1248, Apr. 26, Lining for packing cases, &c.
 Wolstenholme, J., 924, Mar. 27, Steam pumping engines.
 — P., 951, Mar. 30, Lithographic printing.
 Womersley, J., 3141, Oct. 23, Wooden boxes.
 Wood, A., 211, Jan. 23, Cleaning tramways.
 — A., 213, Jan. 23, Tramway cars.
 Wood, A. L. (Lake), 864, Mar. 21, Sewing-machines.
 — A. L. (Lake), 2781, Sep. 19, Sewing-machines.
 Wood, C., 302, Jan. 31, Cooling slag, &c.; and loading
 [same].
 — C., 2618, Sep. 3, Cooling and granulating slag.
 — C. F., 3945, Dec. 28, Cigar machines.
 — G. R., 1542, May 21, Steam-boilers and furnaces.
 — John & R., 3146, Oct. 24, Straining pulp.
 — John A., 2792, Sep. 20, Rotary plough.
 Wood, John F., & Skinner, F. F. (Mills), 3389, Nov. 14,
 [Cleansing and smutting grain, &c].
 Wood, John W., 600, Feb. 26, Stopping holes in ships,
 [boilers, &c].
 — Joseph, 2705, Sep. 12, Spring mattresses, seats, &c.
 — M. D., & Graham, R., 490, Feb. 16, Artificial teeth.
 — R. & J., 3146, Oct. 24, Straining pulp.
 — R. J., 212, Jan. 23, Sweeping streets.
 Wood, Walter A. (Griffin), 1300, Apr. 30, Reaping ma-
 [chines].
 — Walter A. (Griffin), 2607, Sep. 2, Reaping and
 [mowing machines].
 Wood, William A., 3962, Dec. 31, Mowing and reaping.
 Wood, William M. (Stevens), 1932, June 96, Raising, &c.
 [ships' boats].
 Woodbridge, W. E. (Newton), 3702, Dec. 6, Ordnance
 [tubes, &c].
 Woodbury, J. A. (Lake), 1618, May 29, Railway rails.
 — J. A. (Lake), 1619, May 29, Railway wheels.
 — J. A. (Lake), 3778, Dec. 13, Railway wheels.
 — W. (Lake), 3365, Nov. 12, Kaleidoscope.
 Woodbury, W. B., 3654, Dec. 4, Photo-mechanical
 [printing].
 — W. B. (Marcy), 1563, May 22, Magic lanterns.
 Woodbury, W. B., & Busby, A. G. (Davies), 1186, Apr. 20,
 [Stereopticons].
 Woodhouse, S. J., 2602, Sep. 2, Purifying and regulating
 [gas; burners and taps].
 Woodman, A. J., 2199, July 23, Jacquard looms.
 Woods, E. & J., 1908, June 24, Drawing wire.
 Woods, G. (Haseltine), 2321, Aug. 3, Reed organs.
 Woods, J. & E., 1908, June 24, Drawing wire.
 — J. E., 430, Feb. 10, Railway carriages.
 — J. E. T., 277, Jan. 29, Chemical furnaces.
 — J. E. T., & Clark, J., 1923, June 25, Alloy for
 [anti-acid metal, &c].
 — J. E. T., & De Malortie, C. Baron, 3803, Dec. 16,
 [Preserving food].
 Woodward, J., & Emme, J., 267, Jan. 27, Fire-arms.
 Woolley, C., 1284, Apr. 29, Bottles, decanters, &c.

Woolley, C. & G. H., 1283, Apr. 29, Bottles, decanters, &c.
 — G. H. & C., 1283, Apr. 29, Bottles, decanters, &c.
 Woore, A., & Watt, J., 2257, July 29, Heating and forcing
 [liquids].
 Wormald, J., & Swindells, J., 478, Feb. 15, Spanners.
 Worrall, J., 1024, Apr. 6, Scouring, dyeing, &c., piece goods.
 — J., 1550, May 21, Dyeing cloth.
 — J., & Kershaw, J., 1069, Apr. 11, Scouring fabrics.
 — J., & Kershaw, J., 1070, Apr. 11, Finishing cotton
 [cords].
 Worssam, S. W., 1503, May 17, Cutting mitres.
 — S. W., 3442, Nov. 18, Parquetry.
 Worth, A. R., 124, Jan. 16, Preparing, spinning, &c. fibres.
 Worthington, G. B., 3149, Oct. 24, Bottles.
 — J., & Grindrod, J., 640, Mar. 1, Dressing
 [stone].
 Wotherspoon, James, & Fish, W. S., 7, Jan. '1, Yarns,
 [threads, and cordage].
 — John, & Stewart, A. & J., 1441, May 11,
 [Steam-boilers].
 Wright, J., & Gaskell, W., 3201, Oct. 29, Seats and desks.
 — J. R., & Alexander, A., 2497, Aug. 22, Iron & steel.
 — R. A., & Don, T., 970, Apr. 2, Substitutes for
 [leather, &c].
 — R. S., 186, Jan. 20, Setting hydraulic rams.
 — R. S., 1017, Apr. 5, Motive-power.
 — W., 1005, Apr. 5, Flushing water-closets, &c.
 — W., 1940, June 27, Taps for flushing closets, &c.
 — W., 3513, Nov. 23, Preventing water-waste.
 — W. L. G., Broom, W., & Bruce, G. C., 654,
 [Mar. 2, Motive-power engines, &c].
 Wrightson, T., 2333, Aug. 5, Hydraulic hoists.
 Wrigley, B., 1882, June 22, Kilns.
 Wyatt, W. P., & Jones, D., 3128, Oct. 23, Baths.
 Wyke-Smith, W., 2590, Aug. 31, Harness.
 Wyllie, A., & Ritchie, P., 3009, Oct. 12, Scotch bonnets,
 [&c].
 Wysocki, I. L. Odovonge- (Clark), 1536, May 20, Lun-
 [cheon cases].

Y.

Yeadon, S., 583, Feb. 23, Halds or heddles for weaving.
 Yost, G. W. N. (Lake), 679, Mar. 5, Railway rails.
 Young, H., & Kitt, A., 981, Apr. 3, Purifying gas.
 — H. B., 3506, Nov. 23, Raising and lowering vene-
 [tian blinds, &c].
 — J., 413, Feb. 8, Treating natural petroleum.
 — J., 459, Feb. 14, Treating hydro-carbons.
 — J., 617, Feb. 28, Treating hydro-carbons.
 — J., 618, Feb. 28, Obtaining hydro-carbons.
 — J., 868, Mar. 22, Carbonates of soda & potash.
 — J., 1268, Apr. 27, Carbonic acid.
 — J., 2293, July 31, Obtaining motive-power.
 — J., 2988, Oct. 10, Treating ammoniacal liquors.
 — J., 2989, Oct. 10, Carbonate of soda.
 — J., & Racey, G., 498, Feb. 16, Fire-escapes, drop-
 [curtains, &c].
 — R., & Brash, P., 2823, Sep. 24, Lime kilns.
 — W., 1912, June 24, Printing.
 — W., 3548, Nov. 26, Electric telegraph & printing.
 — W., 3574, Nov. 28, Furnaces, grates, and stoves.
 — W., Brash, P., & Scott, A., 2487, Aug. 21, Pro-
 [ducing gas and oil from coal, &c].
 Youngman, W., 2391, Aug. 10, Raising and lowering wine
 [casks, &c].

[Yul-Zam]

AND APPLICANTS FOR PATENTS OF INVENTION.

[Zam-Zys]

Yule, G., 1950, June 27, Rulers for office use, &c.
 — G., 2811, Sep. 24, Rulers.
 — G., 3124, Oct. 23, Sampling tools for butter, &c.

Z.

Zahn, E., 2738, Sep. 14, Combined bag and muff.
 Zamoyaki, J. M., & Jackson, W., 1782, June 13, Axles and
 [crank shafts for railway engines, carriages, &c.]

Zamoyaki, J. M., & Jackson, W., 3458, Nov. 20, Railway
 [engines; carriages, &c.]
 Zanni, G., 3262, Nov. 2, Railway signalling apparatus.
 Zarzecki, S. J. I., ~~Oursel~~, V. C. J., & Chérolama, A. L.,
 [(Lake), 1867, June 1, Boot and shoe heels.
 Zell, T. E., & Wells, J. L. (Hunt), 2915, Oct. 3, Printing
 [and ornamenting].
 Zenger, K. W., 1063, Apr. 10, Purifying iron, copper, &c.
 — K. W., 2584, Aug. 30, Pressure gauges.
 Zimdars, C. E., 553, Feb. 21, Pneumatic fire-alarm.
 — C. E., 3340, Nov. 9, Pneumatic signalling.
 Zuccato, E. de 1963, June 29, Producing copies of writings,
 [&c.]
 Zysel, F., 3903, Dec. 24, Motive-power.

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15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.



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Printed and Published by Order of the Commissioners of Patents

UNDER THE

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BY BENNET WOODCROFT, F.R.S.

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1876.

ALPHABETICAL INDEX

OF

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[The names printed in *Italic* are those of the persons by whom the inventions have been communicated to the Applicants for Letters Patent. The figures following the names are the consecutive numbers of the Applications.]

[Abe-Ain]

[Ain-Ali]

A.

Abel, C. D. (*Weichum*), 1685, May 9, Turntables.
 — C. D. (*Westinghouse*), 1735, May 13, Railway
 [breaks and signals.
 — C. D. (*Von Loewis*), 1938, May 29, Breaking and
 [scutching fibres.
 — C. D. (*Jourdeuil, Parisot, & Guasco*), 2072, June 11,
 [Decorticating hop bines.
 — C. D. (*De Grouilliers & Siemens*), 2833, Aug. 28,
 [Soda and potash.
 — C. D. (*Gottheil*), 3080, Sep. 19, Blue dye stuffs.
 — C. D. (*Westinghouse*), 3840, Nov. 25, Railway
 [breaks.
 Abney, W. de W., 615, Feb. 19, Photo-mechanical
 [printing.
 Absterdam, J. (Newton), 2374, July 9, Semi-steel and
 [railway bars.
 Achard, F. F. A. (Clark), 2350, July 8, Railway breaks.
 Acklom, J. E., 890, Mar. 12, Carriages for conveying
 [food; storing substances.
 Ackroyd, R., & Cockcroft, W. (Midgley) 3438, Oct. 22,
 [Twisting fibres.
 Acton, B., & Mustard, J., 1635, May 6, Feeding carding-
 [engines.
 — R. G., & Cole, F., 110, Jan. 11, Air-engines.
 — R. G., & Cole, F., 2276, July 1, Air-engines.
 Adair, J., 4076, Dec. 11, Bread.
 — W., 3965, Dec. 3, Fog-horns.
 Adames, C. H., 74, Jan. 7, Tea-kettles.
 Adama, H., 1827, May 20, Revolving pistols.
 — James, 3164, Sep. 29, Windmills.
 — John, 552, Feb. 14, Air and steam engines.
 — John, & Jenkins, B., 968, Mar. 15, Air & steam
 [engines.
 Adams, John R. (Clark), 3420, Oct. 22, Attachment or
 [covering for boats.
 Adams, S., Hickinbotham, F., & Marshall, W., 3206, Oct. 3,
 [Fastenings for doors of railway waggons.
 — T., 3435, Oct. 22, Safety-valves.
 — W. M., 1257, Apr. 4, Astronomical instruments.
 — W. M., 2878, Sep. 1, Astronomical instruments.
 Adamson, D., 900, Mar. 12, Steam-boilers.
 Addiscott, F., & Francis, W. P., 3031, Sep. 16, Coffeetina.
 Ager, N., 2215, June 25, Opening, &c. apertures in
 [barrels and cisterns.
 Agudio, T. M., & Cail & Co. (Johnson), 3724, Nov. 15,
 [Propelling carriages; raising, &c. shaft cages.
 Ainsley, D., & Hall, P., 2165, June 20, Boring machinery.

Ainsworth, R., & Eastwood, A. J., 2502, July 21,
 [Cleaning cloths and hides.
 Aitken, H., 4227, Dec. 24, Coking coal, &c.
 — T., 49, Jan. 4, Printing fabrics.
 Akester, J. C., 4172, Dec. 19, Silica gas-stoves.
 Albuquerque, A. de S., A e Condi de Penamacor, Castro,
 [A. P. de S. e, & Hopercraft, S. T., 2484, July 19,
 [Citric acid; tartaric acid; alcohol.
 Alcan, M. (Browne), 4191, Dec. 20, Removing cotton
 [from cotton pods.
 Alcock, Lady L., & Colborne, Hon. J., 4127, Dec. 15,
 [Actuating sewing-machines.
 — M., & Mason, S., 2997, Sep. 12, Keirs for
 [bleaching, &c.
 Alendorff, C., & Lurmann, F. W. (Vaughan), 2481,
 [July 19, Tuyeres.
 Alder, H., 3008, Sep. 13, Beds, hammocks, &c.
 Aldis, O. C. V., & Hyde, J. & J., 3761, Nov. 19, Alarm
 [lamps for mines.
 Aldrich, R., Pitts, J., & Marble, E. (Johnson), 2932,
 [Sep. 6, Cutting flock.
 Alex, M., 1068, Mar. 21, Raising, &c. ships' boats, &c.
 Alexander, D., 3576, Nov. 3, Gullies.
 Alexander, E. H. (Haseltine), 2212, June 25, Sewing-
 [machines.
 — T., (Perry), 2996, Sep. 12, Mechanical toys.
 — T. H. (Haseltine), 326, Jan. 28, Converting
 [cast-iron into steel.
 Alexandre-Balat, A. (Gedge), 2929, Sep. 6, Cleaning and
 [winnowing grain.
 Allan, W., & Stobart, W., 2903, Sep. 3, Weighing ma-
 [chines.
 Allcock, A. T., 816, Mar. 16, Governors.
 — A. T., 1038, Mar. 20, Wood-cutting machines.
 — A. T., 3209, Oct. 3, Cut-off for steam-engines.
 Alldridge, W., 1740, May 13, Buttons.
 — W. C., 2264, June 30, Studs, solitaires, &c.
 Allen, A. H. (Lake), 1737, May 13, Veneers.
 Allen, E., 3888, Nov. 28, Burnishing leather.
 Allen, G. W. van, Stone, W. N., & Bingham, S. H. & E. B.
 [(Newton), 608, Feb. 18, Printing-presses.
 Allen, S. W., 2785, Aug. 22, Steam-hammers.
 Allenby, W., 143, Jan. 14, Harmoniums.
 Alley, S., 537, Feb. 13, Dressing shirts.
 — S., 911, Mar. 13, Springs.
 — S., 1141, Mar. 27, Wheels.
 — S., 1633, May 6, Arranging, &c. retorts.
 — S., 2409, July 12, Multiple lubricators.
 — S., 3148, Sep. 26, Lubricating machinery.
 — S., & Osborn, S., 3379, Oct. 18, Screw-propellers.
 — S., & Handyside, J. B., 3904, Nov. 29, Joining
 [rails.

- Alley, S., & Handy, J. B., 4025, Dec. 11, Joining rails.
 Alley, H. J., 4254, Dec. 27, Furnaces and heating apparatus.
 Allfrey, E. K., 320, Mar. 7, Slide-valves.
 Allibon, G., & Manbré, A., 2, Jan. 1, Safety-valves.
 — G., & Manbré, A., 2908, Nov. 29, Safety-valves.
 Allin, B. H., 4266, Dec. 29, Dressing grain.
 Allist, J. B., & Halpin, D., 2099, June 9, Sugar.
 Allorp, C., & Kolb, A., 316, Jan. 27, Ventilating closets, &c.
 Almén, A. (Almén), 1451, Apr. 22, Preparing medicines.
 Almona & Sarkisian, Sociétés, & Cigaroff, A. H. (Geddes), 4121, Dec. 15, Embroidering and braiding.
 Alsing, G., 1319, Apr. 9, Treating sewage.
 Allenack, P. von H., & Siemens, W. (Siemens), 2004, [June 5, Electric-light.
 — P. von H., & Siemens, W. (Siemens), 2225, [June 27, Electric-telegraphs.
 Altman, L. J., 1744, May 14, Life-belts.
 Ambler, W., & Gawthorp, W., 3392, Oct. 20, Taps and [valves.
 Aménas, A. J., (Almén), 1451, Apr. 22, Preparing [medicines.
 Anders, G. L., & Welch, E. B. (Hunt), 40, Jan. 3, [Printing telegraphs.
 Anderson, B., & Harrison, J., 1985, June 3, Packing [leathers for hydraulic purposes.
 — B., & Harrison, J., 3812, Nov. 22, Steam- [engines.
 — C., 2919, Sep. 5, Propelling tramway cars.
 — C., 3163, Sep. 29, Propelling railway and [tramway carriages.
 — J., & Him, R., 2735, Aug. 18, Knitting machinery.
 — W., 1200, Apr. 1, Checking tram-car & other [fares.
 — W., & Whichcord, J., 2048, June 9, Slabs & [panels for strong-rooms, &c.
 — W. L., 8999, Dec. 4, Ships' cabins.
 André, E. (Wirth), 5848, Nov. 25, Introducing gas into [furnaces.
 Andrew, J. E. H., 2542, July 25, Twisting, &c. tobacco.
 Andrews, A., 1275, Apr. 7, Agricultural elevators.
 Andrews, A. H. (Gibson), 119, Jan. 11, Desks and seats.
 Andrews, J., 2721, Aug. 16, Hanging, &c. millstones; [separating grain, &c.
 — J. C., 404, Feb. 3, Heating feed-water.
 Ange, Guerriero, A., Comte de St. (Touaillon), 2184, [June 23, Horse-shoes.
 Anne, J. St. (Henderson), 3959, Dec. 8, Match-boxes.
 Anthony, B. B., 2697, Aug. 14, Advertising desk or table.
 Anyon, W., 69, Jan. 7, Domestic fire-places.
 Apperly, E., 3816, Nov. 22, Tooth-brushes.
 Appleton, C. J. (Brewer), 4232, Dec. 24, Sewing-machines.
 Apted, J. H., 2328, July 4, Fire-arms.
 Archer, H., 2965, Sep. 10, Leggings for horses.
 — H. Z., Hartshorn, E., & Toone, R., 1018, Mar. 19, [Lace making.
 Ardern, J., & Hodgkinson, H., 8280, Oct. 4, Preparing [fibres.
 Ardron, J. O., & Hare, E., 998, Mar. 18, Rotary screens.
 Argall, J., 68, Jan. 7, Paints.
 Argy, E. A. G. d' (Clark), 1590, May 2, Cigarette papers.
 — E. A. G. d' (Clark), 4012, Dec. 5, Substitute for [glass.
 Armengaud, J., Giffard, P., & Sublet A. (Smith), 627, [Feb. 19, Producing ice and cold.
 Armitage, E., 2665, Aug. 9, Measuring, &c. for wearing- [apparel.
 — J. W., & Noble, B., 952, Mar. 15, Cleaning [yarn.
 — S., & Taylor, W., 4254, Dec. 27, Safety-lamps.
 — T. B., 2334, July 5, Disintegrating wood for [pulp.
 Armstrong, John, & Davis, J. (Hasseltine), 2353, July 8, [Tanning.
 Armstrong, Joseph, 532, Feb. 13, Wheels.
 Arnall, G., 1306, Apr. 9, Rods for pumps, screws, ships' [keels, &c.
 Arnold, J., 777, Mar. 4, Clinical thermometers, &c.
 — J., 1404, Apr. 18, Instruments for vaccinating.
 — J., 2516, July 23, Bandages, spicata, &c.
 — T., 2897, Sep. 2, Heating feed-water.
 — W., & Cresshero, E. T., 2676, Aug. 12, Vice- [chairs for rail and tramways.
 Arnold, W. M. (Byron), 3247, Oct. 7, Compounding metals.
 — W. M. (Byron), 3365, Oct. 17, Ordnance, &c.
 Arnot, J., & Collins, C. U., 462, Feb. 9, Lock and latch [furniture.
 Aratz, C. O. (Mewburn), 3100, Sep. 22, Buildings and [materials.
 Arros, C. H. O. Hallez d', 1000, Mar. 18, Magneto-electric engines.
 Arrott, A. R., 2236, June 27, Soda and chlorine.
 — A. R., 4164, Dec. 18, Hydrochloric acid.
 Artasookoff, C. N. (Stepanoff), 1254, Apr. 4, Releasing [ships' boats, &c.
 Arundel, H. B., & Elce, J., 1950, May 29, Spinning.
 Asbury, C., 139, Jan. 13, Steam-boilers and furnaces.
 Asbury, T. H. (Johnson), 4292, Dec. 31, Blowing machines.
 Ascough, J., 3144, Sep. 26, Brooms and brushes.
 Ash, G. C., 544, Feb. 13, Hats.
 Ashbee, G. H., Platt, J., Tweddell, R. H., & Wilson, E., [2145, June 18, Rivetting girders, &c.
 Ashcroft, G., 1758, May 14, Hydraulic-presses.
 — G., 1760, May 14, Hydraulic-presses.
 Ashcroft, J. (Lake), 1783, May 15, Coffee.
 Ashe, E. D. (Newton), 2736, Aug. 18, Converting motions.
 Ashford, T., 4063, Dec. 10, Nails, tacks, &c.
 Ashley, H. M., & Hattersley, R. C. & T., 2862, Aug. 30, [Stove grates.
 Ashley, J. T. (Fuller), 3973, Dec. 3, Printing-presses.
 — J. T. (Fuller), 3974, Dec. 3, Paper feeder for [printing-presses.
 Ashton, R., Worsley, G., & Brelsford, J., 3557, Nov. 1, [Felt hats.
 — W., 2539, July 25, Perambulators.
 Ashworth, James, 1569, Apr. 30, Motive-power engines.
 — John, 3719, Nov. 15, Steam-engines.
 Askew, C., & Reynolds, A., 3403, Oct. 21, Raising sunken [vessels.
 Aspinall, H., 1624, May 5, Watches and chronometers.
 Asquith, R., 1424, Apr. 19, Valves and expansion gear [of steam-engines.
 — S. E., & Greenwood, F. A., 2213, June 25, Spinning.
 Asthower, F. (Wirth), 1135, Mar. 27, Steel-rails.
 Aston, J. J., 598, Feb. 18, Propelling vessels.
 Atherton, A. T., & Whitehead, W. E. (Hasseltine), 3047, [Sep. 17, Spinning.
 Athow, N., 1043, Mar. 20, Dyeing, printing, &c.
 Atkey, A. J., & Donald, A., 1653, May 7, Shaping and [boring metals.
 — A. J., & Donald, A., 1693, May 10, Orc stampers, &c.
 Atkin, R., 1361, Apr. 15, Constructing, propelling, &c. [ships.
 Atkins, F. H., 556, Feb. 14, Filtering water, sewage, &c.
 Atkinson, H., & White, R., 3260, Oct. 8, Opening, &c. [window-sashes.
 Attwater, H. C., 561, Feb. 15, Supply and stop-valve.
 Attwood, R. W., 1071, Mar. 22, Motive-power.
 Aublet, E. A., & Baudot, J. G. (Wright), 175, Jan. 16, [Boots and shoes.
 Audouin, M. E. P., & Pelouze, E. P. (Clark), 109, Jan. 10, [Condensing liquefiable matters.
 Austin, J., Brown, S. S., & Ayton, F., 1632, May 6, Looms.
 Auteuil de Savignon (Henry), 667, Feb. 21, Sugar.

Autier, C. (*Falconnier*), 4202, Dec. 22, Pressure cocks.
 Averell, E. D. (Newton), 20, Jan. 1, Ruling paper.
 — E. D. (Haseltine), 4031, Dec. 6, Stitching books.
 Avery, C., 2398, July 11, Teeth gearing for horse-power.
 Avery, G. (Clark), 189, Jan. 16, Velocipedes.
 — J. G. (Lake), 2496, July 19, Spinning.
 Aylmer, J. E. F., 3063, Sep. 18, Wood-pulp, &c.
 Aylward, F., 113, Jan. 11, Lowering, &c. ships' boats.
 Ayre, A. S., 3409, Oct. 21, Compressing oil seeds.
 Ayres, J. A. (Talcott), 414, Feb. 4, Screws.
 — J. A. (Williams), 1024, Mar. 19, Screws.
 Ayrtton, F., Austin, J., & Brown, S. S., 1632, May 6, Looms.
 Aytoun, R., 2559, July 28, Working railway trains.

B.

Babbett, H. M., Miles, C. W., & Hickey, P. (Griffin),
 [908, Mar. 13, Carpet looms.
 Babbitt, B. T. (Newton), 2271, June 30, Propelling boats
 [and vessels.
 — B. T. (Newton), 2962, Sep. 9, Steam-boilers and
 [condensers.
 Babcock, G. H., & Wilcox, S., 1154, Mar. 27, Steam-boilers.
 Backus, O. J., Sawyer, A. F., & Loryea, A. M., 217, Jan. 18,
 [Motive-power.
 Bacon, E., 1790, May 16, Needle-threaders.
 — E., 2514, July 23, Bottles.
 — J., 232, Jan. 20, Drying bricks, pottery, &c.
 Badt, A. (Clark), 1193, Mar. 31, Gas.
 Baerlein, M., 913, Mar. 13, Drying yarn.
 — M., 4014, Dec. 5, Sizing and preparing yarn.
 Baffoy, P. H., & Rogé, H. N. (Clark), 237, Jan. 20,
 [Railway switches and points.
 Baggs, I., 1046, Mar. 20, Gas.
 — I., 1471, Apr. 23, Gas.
 — I., 2000, June 4, Gas.
 Bagot, E., 3039, Sep. 16, Tin and terne plates.
 Bailey, T. T., & Waddington, H., 293, Jan. 25, Miners'
 [safety-lamps.
 — W. H., 1706, May 16, Sound and flash-light tele-
 [graphs, &c.
 Bailleux-Lemaire & Co. (Johnson), 4221, Dec. 23,
 [Treating fibres.
 Baillie, R., 3558, Nov. 1, Heating locomotive boilers.
 Baines, W., 820, Mar. 6, Railway switches, points, and
 [signals.
 Baird, R., 3391, Oct. 20, Steam-boiler furnaces.
 Baker, H. M. (Johnson), 3744, Nov. 18, Iron and steel.
 Baker, J. L., & Cox, T. N., 1731, May 12, Horse-hoes.
 — T., 3009, Sep. 13, Stoppers for casks, bottles, &c.
 — W. F. (Bogardus), 573, Feb. 15, Hats, caps, &c.
 — W. L., 421, Feb. 15, Supplying fires with fuel.
 Baladia, J., & Osborne, T., 917, Mar. 13, Knitted fabrics.
 Balat, A. Alexandre- (Gedge), 2929, Sep. 6, Cleaning
 [and winnowing grain.
 Baldwin, J. C., & Turner, G., 604, Feb. 18, Preparing,
 [combing, &c. fibres.
 — T., 3161, Sep. 29, Steam-engines.
 Balfour, R., 2014, June 5, Thinning turnips.
 Ball, C. J., 1638, May 6, Rock-drills, &c.
 — C. J., 3030, Sept. 16, Stone breaking machines.
 — C. J. (François & Dubois), 3611, Nov. 6, Boring
 [rock, &c.
 — J. A., 4087, Dec. 11, Dredging and excavating.
 — O., & Jowett, E., 2610, Aug. 1, Jacquard engines.
 Balmforth, Edward, E. & J., 4108, Dec. 13, Hydraulic
 [cranes.
 — Edwin, E. & J., 4108, Dec. 13, Hydraulic cranes.
 — J. E. & E., 4108, Dec. 13, Hydraulic cranes.
 Bamber, R., 439, Feb. 6, Fire-places.

Bamber, W., 3305, Oct. 11, Gassing yarn.
 Bamford, S. B., 2313, July 3, Cheese-making machines.
 Banks, E., Forester, T., Robey, C., & De Bettignies Bros.,
 [970, Mar. 15, Kilns.
 — J. H., 2468, July 17, Producing printing surfaces.
 — K., 3539, Oct. 30, Consuming smoke and econo-
 [mising fuel.
 Banner, E. G., 2691, Aug. 13, Disinfecting apparatus.
 Barber, J., & Ingham, J. (Burns), 2711, Aug. 15, Ge-
 [nerating steam.
 — W. J., 1161, Mar. 28, Boot and shoe tips.
 Barclay, A., 990, Mar. 18, Making pig-iron; furnaces.
 Barcroft, H., 3428, Oct. 22, Steam-engines.
 Bardel, H. de (Clark), 2205, June 24, Heating feed-water.
 Bardsley, J. P., Fletcher, R. J., Gibson, E., & Taylor,
 [W. J., 866, Mar. 11, Felt hats, &c.
 Barff, A. (Kidd), 520, Feb. 12, Heating steam-boilers.
 Barge, E., 4049, Dec. 9, Chairs.
 Barker, A., 582, Feb. 17, Clog irons.
 — D., 1321, Apr. 10, Artificial fuel.
 — I., 2883, Sep. 2, Spades, shovels, &c.
 Barling, J., 976, Mar. 17, Firegrates and stoves.
 Barlow, C. (Taylor), 1523, Apr. 26, Rifling ordnance.
 — C. P., & Carr, D. A., 344, Jan. 28, Railway signals.
 — H. B. (Galland), 827, Mar. 7, Sulphuric acid.
 — H. B. (Galland), 1129, Mar. 26, Pneumatic pumps.
 — H. B. (Galland), 1130, Mar. 26, Cleansing casks.
 — H. B. (Galland), 1346, Apr. 14, Refrigerators.
 — H. B. (Galland), 1443, Apr. 21, Cooling fluids, &c.
 — H. B. (Sargent), 2314, July 4, Washing and
 [dyeing fibres.
 — H. B. (Noury & Masse), 2771, Aug. 21, Peat-fuel.
 — H. B. (Rieter, Wehrli, & Groebli), 4278, Dec. 30,
 [Embroidering-machines.
 — J. R., & Walsh, R., 713, Feb. 26, Distributing
 [water for extinguishing fire, &c.
 — W. H., & W. H., 3688, Nov. 12, Writing pens and
 [holders, &c.
 Barnard, C., & Weekes, C., 209, Jan. 18, Fire-lighters.
 — J. P., 428, Feb. 5, Shaft cages, lifts, &c.
 — T. J., 3715, Nov. 15, Treating low class ores, &c.
 Barnby, T., 3725, Nov. 15, Hair-pins.
 Barnes, D., & Knowles, M., 105, Jan. 10, Looms.
 — T., & Chalk, R., 4069, Dec. 10, Fire-grates.
 Barnett, F., 2598, July 31, Asphalt paving.
 — J., 179, Jan. 16, Motive-power.
 Barney, W. C., 785, Mar. 4, Electric-telegraphs.
 — W. C., 861, Mar. 10, Electric-telegraphs.
 Barraclough, A., 1904, May 27, Dewing, oiling, &c. fabrics
 [and fibres.
 — C., & Lightowler, J., 1841, May 21, Looms.
 — J. E., 756, Mar. 1, Fire-places, ovens & boilers.
 — J. E., 1566, Apr. 30, Kitchen-ranges.
 — J. E., 2857, Aug. 30, Fire-places, ovens and
 [boilers.
 Barraud, H., 3106, Sep. 22, Photographic pictures.
 Barrett, E. C., 1718, May 12, Propelling ships.
 — J., & Rhoades, G. W., 1694, May 10, Locking,
 [and railway carriage and other doors.
 Barrington, F. L., Weatherdon, B. F., & Colborne, J., 2462,
 [July 16, Propelling ships.
 Barrow, John & W., 1548, Apr. 29, Kilns.
 — John, & Green, H., 2889, Sep. 2, Supplying,
 [igniting and extinguishing gas.
 — Joseph, 2154, June 19, Slotting & planing metals.
 — T., 4220, Dec. 23, Fog-signals.
 — W. & J., 1548, Apr. 29, Kilns.
 Bartlett, E. W. A., 1567, Apr. 30, Socks for curing diseases
 [of the feet.
 — John, 1484, Apr. 24, Weighing-machines.
 — Joseph, 4145, Dec. 17, Type.
 Bartley, G. C. T., 1009, Mar. 19, Fire-places.

- Barton, C., 3967, Dec. 3, Locks and latches.
 — C., 4139, Dec. 17, Locks.
 Barton, K. C. (Lake), 540, Feb. 13, Sewing sails, &c.
 Barton, W., 1282, Apr. 7, Fire-places.
 Bash, S., 506, Feb. 11, Bobbins.
 Bass, I. G., 3718, Nov. 15, Peat-fuel.
 Bass, J. P. (Haseltine), 2905, Sep. 3, Cleaning condensers.
 Bassée, P. E. W., 3837, Nov. 24, Guns and gun carriages.
 Basset, C. F. A. (Browne), 1632, Apr. 15, Revolvers.
 Bassett, H., 2866, Aug. 30, Valve trumpets & French horns.
 Basson, W. (Hahn), 1905, May 27, Wheels.
 Bastos, A. A. R. de, 1856, May 22, Advertising.
 Batchelor, J., & Withers, H. H., 2280, July 1, Reaping, &c.; binding into sheaves.
 Bate, J., & Follows, F. W., 2528, July 24, Cutting, &c. gorse.
 — J., & Follows, F. W., 2836, Aug. 28, Lawn-mowers, &c.
 Bate, W. S. (Hunt), 2794, Aug. 25, Compound faucets.
 Bates, F. G., & Rodier, L. C. (Hughes), 1467, Apr. 23, Fire-arms.
 Bates, W., 1294, Apr. 8, Securing lids of tea-pots, &c.
 Batho, W. F. (Bruce), 1809, May 19, Excavating under water, &c.
 — W. F., & Hedderwick, P. D., 3708, Nov. 14, Excavating under water, &c.
 Batley, W. S., 242, Jan. 21, Bricks and tiles.
 Batt, H., 2520, July 23, Hoists.
 Battersby, J., Wilson, W., & Burch, H., 2687, Aug. 13, Mowing and reaping.
 Battles, J. P., & Pearl, O. (Johnson), 18, Jan. 1, Spinning.
 Baudot, J. G., & Aublet, E. A. (Wright), 175, Jan. 16, Boots and shoes.
 Baudouin, L. (Newton), 3548, Oct. 31, Bleaching and drying sugar.
 Baudouin, P. (Keene), 834, Mar. 8, Imitating silver.
 Bauer, A., & Krieb, F. (Fisk), 1584, May 2, Printing-telegraphs.
 Baxter, M. (Hollings), 4059, Dec. 9, Seed-drills.
 — R. C. (Folhard), 1687, May 9, Engaging and disengaging ships' boats.
 — R. C. (Folhard), 2124, June 16, Raising and lowering ships' boats.
 Baxter, W. D. (Lake), 3343, Oct. 15, Pumps.
 Baxter, W. H., 2421, July 14, Weighing and measuring.
 Bayart, F., 2949, Sep. 8, Cutting pile fabrics.
 Bayley, C. H., & Cheetham, J., 475, Feb. 10, Combining-machines.
 — J. C., 292, Jan. 25, Tuyeres.
 Baynes, R., 78, Jan. 8, Heating feed-water.
 Bazin, E., 2552, July 26, Constructing & propelling ships.
 — E., 4274, Dec. 30, Life-buoys.
 Beadon, G., 1048, Mar. 20, Saving life from drowning, &c.
 Beal, J., & Gratton, T., 466, Feb. 8, Railway wheels & tires.
 Beale, J., 3138, Sep. 26, Air, gas or fluid pumps.
 Beams, T., 2028, June 7, Heating feed-water, boiling liquor in brewers' vats, &c.
 Beanes, E., 2129, June 17, Brewing, &c.
 Beanland, J. E., 3930, Dec. 1, Window quadrants.
 Bear, G., 1279, Apr. 7, Cigars.
 Beard, E. J. (Newton), 1882, May 24, Bale-fasteners.
 Beart, W. F., 3604, Nov. 5, Brick kilns.
 Beasley, H., 3923, Dec. 1, Linen stamp.
 Beath, J. M., & Martin, S. B. (Lake), 290, Jan. 24, Making ice, cooling liquids, &c.
 Beaufort, W. M., 3931, Dec. 1, Joints of boxes, &c.
 Beaumont, F. E. B., 1919, May 28, Rock drilling.
 Beauregard, F. A. Testud de, Collet, A., & De Lavillasse, P., 4166, Dec. 18, Treating sea-weed, &c.
 Beck F. (Lake), 795, Mar. 5, Paper-cloth, &c.
 Becker, L. M., & Jones, T., 2893, Sep. 3, Sewing-machine spools.
 Beckett, J., 2592, July 31, Albumenising paper.
 — W. H., 4285, Dec. 31, Valves.
 Beckwith, J. H., & Galloway, C. J., 1620, May 5, Slide-valves.
 — J. H., & Galloway, C. J., 4036, Dec. 8, Steam-boilers.
 Bede & Co. & Farcot & Sons (Murdoch), 1862, May 22, Steam-engines.
 — E. (Murdoch), 1711, May 10, Operating on cardings of fibres.
 Bedington, R. J., & Greaves, T., 3872, Nov. 27, Curtain poles.
 Beecroft, W., 1195, Apr. 1, Moulding metals.
 Beeley, T., & Fairbairn, Sir W., 270, Jan. 23, Steam-boilers.
 Beer, A. J., 1343, Apr. 12, Letting off birds from traps.
 Beery, S. (Clark), 1226, Apr. 2, Carriage heads.
 Beesley, J., L. & W., 3498, Oct. 28, Punching, shearing, &c. metals.
 — L., W. & J., 3498, Oct. 28, Punching, shearing, &c. metals.
 — W., J. & L., 3498, Oct. 28, Punching, shearing, &c. metals.
 Beins, H. (Wirth), 3194, Oct. 2, Carbonic acid, and applying same.
 Bejar O'Luwor, L. de (Browne), 2327, July 4, Electro-telegraphy.
 Béléguic, E. C. (Johnson), 1898, May 26, Ship-building.
 Bell, James, 2764, Aug. 21, Railway points or switches.
 — James, 3443, Oct. 23, Wringing & mangling machines.
 — James (Bell), 3033, Sep. 16, Washing-machines.
 — John & R., 3910, Nov. 29, Utilizing waste heat in retorts.
 — R. & J., 3910, Nov. 29, Utilizing waste heat in retorts.
 Bell, T. (Bell), 3033, Sep. 16, Washing-machines.
 Bell, T., & Goodman, A., 641, Feb. 20, Furnaces.
 Bellairs, H. S. K., 1159, Mar. 28, Turning leaves of music.
 Bellour, F., & Carbonel, M. (Clark), 4248, Dec. 26, Teaching music.
 Belt, A., 3372, Oct. 18, Gas-burners.
 Bénard, V. A., & Bocquet, J. F. (Clark), 1884, May 24, Peat-fuel.
 Bennett, H. H., 1284, Apr. 8, Carriage seats, &c.
 — James, 1707, May 10, Shuttles.
 — John, & Stockman, B. P., 3166, Sep. 29, Railway carriage lamps.
 — John E., & Hydes, T., 2336, July 5, Building material.
 — John E., & Hydes, T., 3242, Oct. 6, Heating feed-water.
 — John R., 2046, June 9, Slide-valves.
 — Joseph, 367, Jan. 30, Heating feed-water.
 — Joseph J., 3345, Oct. 16, Pavement and tiles.
 — T., 3787, Nov. 20, Piling iron.
 — W. H. (Collett), 825, Mar. 7, Packing and preserving hams, &c.
 Benson, M. (Cope & Maxwell), 1387, Apr. 17, Steam pumping machinery.
 — M. (Morris, Robinson & MacKenzie), 3697, Nov. 13, Oil-gas.
 Bentall, E. H., 318, Jan. 27, Chaff-cutters.
 Bentley, G. W., & Garth, R. F., 145, Jan. 14, Treating hides, cotton-waste, &c.
 — S., & Mullard, T., 3509, Oct. 29, Heat generator and coal economiser.
 Beque, A., 3990, Dec. 4, Bread.
 Berchtold & Scheller (Wirth), 2380, July 10, Steam-engines.
 Berdan, H. (Marval), 398, Feb. 3, Fire-arms.
 — H. (Marval), 413, Feb. 4, Fire-arms.
 — H. (Bradley), 2464, July 17, Cartridge cases.
 Bérenger, J. A. (Paget), 3953, Dec. 2, Softening, &c. water.
 Berg, E. S., 1738, May 13, Sewing-machines.
 Bergeron, C. (Johnson), 1308, Apr. 9, Removing sand banks.
 Bergh, J. van den, 8, Jan. 1, Harness.
 Bernadac, H., 4067, Dec. 10, Regulating water-supply of steam-boilers.
 Bernhard, I. (Vaughan), 3771, Nov. 20, Preventing incrustation in steam-boilers.

- Bernier, C. N., & Vialt, J., 543, Feb. 13, Railway signals.
 Bernstein, A., 332, Jan. 28, Railway signals.
 — A., 333, Jan. 28, Railway switches.
 Berry, J. H., Randolph, M., & Eichbaum, F. H. (Hunter),
 [2177, June 21, Gas.
 Berry, S., & Roberts, S., 4119, Dec. 15, Carding-engines.
 Berthon, E. L., 1384, Apr. 16, Collapsible boats; lower-
 [ing, &c. boats.
 Berthoud, E. (Browne), 2331, July 5, Sheet metal boxes.
 Bertrand, L. E. (Johnson), 2688, Aug. 13, Umbrellas
 [and parasols.
 Bessell, H., & Wheeler, J. A., 3944, Dec. 2, Palliasses.
 Bessemer, H., 1076, Mar. 22, Controlling, &c. suspended
 [saloons; discharging marine artillery.
 Best, J. R., & Lightowler, J., 617, Feb. 19, Kitchen-ranges.
 Bétis, P. M., 1728, May 12, Clipping animals.
 Betteley, J. H., & Sharer, T., 238, Jan. 20, Railway rolling
 [stock.
 Bettignies, Bros., De, Robey, C., Banks, E., & Forester, T.,
 [970, Mar. 15, Kilns.
 Betts, W., 2240, June 27, Stoppering and capsuling
 [bottles.
 — W., 2611, Aug. 1, Ornamenting capsules.
 Bévan, E., 2718, Aug. 16, Fibres and pulp.
 — E., 3333, Oct. 15, Fibres and pulp.
 — E., & Drew, T., 931, Mar. 14, Paper-pulp & fibres.
 — S., 3898, Nov. 28, Turning leaves of books.
 Bevington, T., 1030, Mar. 20, Gloves.
 Bezer, H., 2466, July 17, Registering apparatus for vehicles.
 — H., 3160, Sep. 27, Registering apparatus for vehicles.
 Bianchini, G. (Gray), 1430, Apr. 19, Storing oils, &c.
 Bickerton, Ralph & R., 748, Mar. 1, Reaping and mowing.
 — Richard & R., 748, Mar. 1, Reaping and mowing.
 Bickford, D., Spooner, & Pyroxyline Manufacturing Co.,
 [1170, Mar. 29, Pyroxyline and collodion.
 Biddell, G. A., & Brown, T. C., 1301, Apr. 8, Steam-en-
 [gines and boilers.
 Bidwell, A., S. & J., 2291, July 2, Tooth-brushes.
 — J., A. & S., 2291, July 2, Tooth-brushes.
 — S., J. & A., 2291, July 2, Tooth-brushes.
 Biennuit, A. A. (Bonneville), 1348, Apr. 14, Ordnance,
 [fire-arms, cartridges, &c.
 Biertumpfel, H. A., 3581, Nov. 4, Candles.
 Billingham, F., & McDowall, W., 1492, Apr. 24, Washing
 [and wringing fabrics.
 Billups, J. E., & Lee, E. P., 1341, Apr. 12, Photographic
 [pictures.
 — J. E., & Lee, E. P., 1449, Apr. 22, Producing
 [photographic pictures on porcelain, &c.
 Bingham, E. B. & S. H., Van Allen, G. W., & Stone,
 [W. N. (Newton), 608, Feb. 18, Printing-presses.
 — S. H. & E. B., Van Allen, G. W., & Stone, W. N.
 [Newton), 608, Feb. 18, Printing-presses.
 Bingham, T. R. D., 3153, Sep. 27, Covering ships' hatch-
 [ways.
 Binks, C., 2169, June 21, Iron and steel.
 Binns, L., 2360, July 8, Endless bands, cords, &c.
 Birch, J. (McGiffert & Birch), 3390, Oct. 20, Stove polish.
 Birch, R., & McGiffert, W. (Birch), 3390, Oct. 20, Stove
 [polish.
 — W., 4234, Dec. 24, Smoothing and guiding calico
 [for bleachers, dyers, &c.
 Bird, J., Worth, J., Fogg, J., & Oldham, J., 2886, Sep. 2,
 [Stiffening felt hats.
 Birnbaum, B., 1475, Apr. 23, Garment for driving, &c.
 Birt, G. R., & Duckham, F. E., 1297, Apr. 8, Elevators.
 Bischof, G., 38, Jan. 3, Purifying water.
 Bishop, T. B., & Hall, H. M., 2555, July 26, Sewing-
 [machines.
 Black, T., 920, Mar. 13, Ships' equilibrium berths.
 — T., 1367, Apr. 16, Steam-engines.
 — T., 1368, Apr. 16, Steam-boilers.
 Black, T., 2580, July 30, Steam-engine valves.
 — T., 3325, Oct. 14, Cleaning and stopping tubes.
 — W., 1264, Apr. 4, Clearing rail and tramway rails.
 — W., 1876, May 24, Registering apparatus for
 [vehicles.
 — W., & Maher, A. J., 1668, May 8, Transferring
 [rolling stock on tramways, &c.
 Blacker, D., 3269, Oct. 9, Condensing, &c. noxious gases.
 Blackman, A. L. (Lake), 1831, May 20, Wheels.
 Blake, E. C. T., 3777, Nov. 20, Treating and bleaching
 [jute, &c.
 — E. O. (Cutting), 3243, Oct. 6, Carburetting, &c. air.
 Blake, G. F. (Lake), 452, Feb. 7, Steam-engine valves.
 — G. F. (Lake), 454, Feb. 7, Steam-engine valves.
 — L. R. (Lake), 227, Jan. 18, Sewing-machines.
 — L. R. (Lake), 3470, Oct. 25, Nails or tacks.
 — L. R. (Lake), 3475, Oct. 25, Lasting boots & shoes.
 Blake, P. A., 342, Jan. 28, Fire-alarms.
 — P. A., 1429, Apr. 19, Fire-alarms.
 Blakey, J., 1723, May 12, Leather.
 — J., 1821, May 20, Stretching boots and shoes.
 Blakey, M. (Tasker), 3980, Dec. 4, Pipe-couplings.
 Blamiers, T., 2001, June 4, Saddle-trees.
 Bland, C., Skaife, T., & Gillett, W., 4141, Dec. 17, Bell
 [musical instruments and bells.
 Blarcom, A. L. van, & Hall, T. S. (Haseltine), 3290,
 [Oct. 10, Railway signals.
 Blick, J., 1243, Apr. 3, Railway breaks.
 Bligh, S., 3193, Oct. 2, Fire-stoves and grates.
 Blondel, J., & Bruneau, E. S. J., 1553, Apr. 29, Boilers
 [and furnaces.
 Blott, A. F., 3127, Sep. 25, Taps for casks.
 Blundell, G. T., J. W. & T., 671, Feb. 22, Lavatories.
 — G. T., J. W. & T., 1099, Mar. 25, Waterclosets.
 — J. W., T. & G. T., 671, Feb. 22, Lavatories.
 — J. W., T. & G. T., 1099, Mar. 25, Waterclosets.
 — T., G. T. & J. W., 671, Feb. 22, Lavatories.
 — T., G. T. & J. W., 1099, Mar. 25, Waterclosets.
 — W., 2344, July 7, Irrigating, sponging, syring-
 [ing, and administering injections and douches.
 Blythe, J. B. (Hughes), 3437, Oct. 22, Treating wood, &c.
 Boaz, W., 3171, Sep. 30, Stopping or closing tubes.
 Boby, R., 2300, July 2, Separating or sorting seeds.
 Bocquet, J. F., & Bénard, V. A. (Clark), 1884, May 24,
 [Peat-fuel.
 Bodin, L. Brunel-, & Brunel-Marchand, I. F. (Gedge),
 [375, Jan. 31, Blocking boots.
 Bodman, W. J., 1720, May 12, Harrows.
 Bodmer, J. J., 4284, Dec. 31, Artificial manure, fuel, &c.
 — J. J. & L. R., 2026, June 6, Extracting moisture
 [from potters' clay, &c.
 — L. R., 590, Feb. 17, Artificial stone and bricks;
 [compressing clay, coal, &c.
 — L. R. & J. J., 2026, June 6, Extracting moisture
 [from potters' clay, &c.
 Boes, J., 34, Jan. 2, Baking-ovens.
 — J., 808, Mar. 6, Consuming smoke and saving fuel.
 Bogardus, A. (Baker), 573, Feb. 15, Hats, caps, &c.
 Boin, A., & Holland, W., 3547, Oct. 31, Umbrellas and
 [parasols.
 Bois, C. du (Haseltine), 1250, Apr. 4, Elevating.
 Bois, L., 2936, Sep. 6, Gas.
 — L., 3452, Oct. 23, Caustic soda.
 Boissel, V., & Hubert, P., 4011, Dec. 5, Stoppering bottles.
 Bolette, I. S. (Mills), 2477, July 18, Carding-engines.
 Bolton, F. J., & Webber, C. E., 686, Feb. 24, Obtaining
 [photometric measurements.
 — J. C., & Whiting, G. F., 39, Jan. 3, Window-
 [fasteners.
 Bonamy, A. (Ducomet), 2377, July 9, Nets.
 Bonham, E. W., 4109, Dec. 13, Asphalted pavements.
 Bonnar, T. E., 831, Mar. 7, Washing-machines.

Bonnefond, N. A. (Clark), 1830, Apr. 10, Registering
[the flow of liquids.

Bonner, S., 1265, Apr. 4, Kilns.

Bonneville, H. A. (*Martin*), 174, Jan. 16, Spinning.

— H. A. (*Schenck & Hayek*), 310, Jan. 27,
[Artificial stone.

— H. A. (*Martin*), 486, Feb. 10, Presses.

— H. A. (*Schenck & Maurer*), 914, Mar. 13,
[Governors.

— H. A. (*De Mestre*), 1036, Mar. 20, Corking-
[bottles.

— H. A. (*Martin*), 1148, Mar. 27, Presses.

— H. A. (*Biennait*), 1348, Apr. 14, Ordnance,
[fire-arms, cartridges, &c.

— H. A. (*Warth*), 1572, May 1, Piling textile
[fabrics.

— H. A. (*Maitre*), 2010, June 5, Covering sur-
[faces with wood.

— H. A. (*Radde*), 2091, June 13, Conductors
[for telegraph wires.

— H. A. (*Weisher*), 2092, June 13, Ship-building.

— H. A. (*Larché*), 2258, June 30, Spinning.

— H. A. (*Grüninger*), 2305, July 3, Steam-
[engine breaks.

— H. A. (*Johnson*), 2342, July 7, Fluid-meters.

— H. A. (*Couteau*), 2948, Sep. 8, Sowing
[potatoes.

— H. A. (*Schenck & Maurer*), 2966, Sept. 10,
[Governors.

— H. A. (*Klotz*), 3991, Dec. 4, Sewing-machines.

— H. A. (*Grandjean*), 4201, Dec. 22, Foot-
[warmers.

— H. A. (*Fontaine*), 4260, Dec. 29, Preserving
[life at sea.

Bonnewell, W. H., 2606, Aug. 1, Advertising.

Bönten, A., 4065, Dec. 10, Finishing woven fabrics.

Bookey, W. T. E., 3875, Nov. 27, Excavating & raising
[materials.

Boomer, G. B., 3003, Sep. 12, Screw-presses.

Booth, E., 1040, Mar. 20, Pin or pin winding machines.

— James, & Gardam, J. B., 1603, May 3, Imitation
[seal skins, &c.

— John, 1373, Apr. 16, Kitchen-ranges.

Boothroyd, B., 250, Jan. 22, Painting venetian blinds, &c.

Bopp-du-Pont, L., 2076, June 11, Cooking.

Borden, G., & J. G. (Clark), 3675, Nov. 11, Preserving,
[&c., milk.

— G., & J. G. (Clark), 3676, Nov. 11, Condensed
[milk.

— J. G., & G. (Clark), 3675, Nov. 11, Preserving,
[&c., milk.

— J. G., & G. (Clark), 3676, Nov. 11, Condensed
[milk.

Borlase, E., 269, Jan. 23, Separating metals and metallic
[ores.

Boschan, C. (Wirth), 1692, May 9, Promoting combus-
[tion of smoke.

— C. (Wirth), 3454, Oct. 24, Smoke consuming
[furnaces.

— K. (Lake), 2355, July 8, Spark-catchers.

Bostelmann, C. O., 1447, Apr. 21, Measuring, &c. flow
[of beer and other liquids.

Botterill, J. & J., & Wolstenholme, R., 1744, May 13,
[Steam-boilers and hot-water feed.

Bottomley, W., & Naylor, M., 167, Jan. 15, Weaving.

— W. H., Shackleton, J., Naylor, J., & Crabtree, W.,
[4162, Dec. 18, Looms.

Bottum, J. M. (Mills), 1983, June 3, Governors.

Botwood, W., 742, Feb. 28, Carriages.

— W., 1615, May 5, Carriages.

Boucherville, G. B. de (Clark), 2583, July 30, Propelling
[ships.

Bouillon, E. (Russell), 2009, June 5, Sewing-machines.

— E. (Russell), 3976, Dec. 3, Sewing-machines.

Bouju, L. & M. R., & Chamas, J. F. E., 1203, Apr. 2,
[Obtaining textiles.

— M. R., 2416, July 14, Paper-pulp, &c., from fibres.

— M. R., 4083, Dec. 8, Vegetable oils.

— M. R. & L., & Chamas, J. F. E., 1208, Apr. 2,
[Obtaining textiles.

Boulton, M. P. W., 3536, Oct. 30, Propelling vessels.

Boundy, C., 17, Jan. 1, Recovering zinc, &c.

Bourget, L., 2935, Sep. 6, Propelling vessels.

Bourry, E. A., 3046, Sep. 16, Steam-boilers.

Bousfield, E. T., & Howard, J., 1237, Apr. 3, Steam-
[boilers.

— G. T. (*Freeman*), 980, Mar. 17, Cheese.

— G. T. (*Lewis*), 1448, Apr. 21, Shaping and
[polishing stone, &c.

— G. T. (*Von Scheliha*) 1585, May 2, Torpedoes.

— G. T. (*Eichmeyer*), 1794, May 16, Engines,
[meters and pumps.

— G. T. (*Moody*), 2023, June 6, Locks.

— G. T. (*Haskin*), 2221, June 26, Tunnelling.

— G. T. (*Mackinnon*), 2235, June 27, Lamps.

— G. T. (*Shedd*), 2641, Aug. 6, Sewing-machines.

— G. T. (*Guglielmini*), 3038, Sep. 16, Motive-
[power.

— G. T. (*Stevens*), 3575, Nov. 3, Furnaces.

Bouttier, L., & Couhault, M. J. B., 3951, Dec. 2, Sheep-
[shears.

Bowden, J., 399, Feb. 3, Salt.

Bower, A. S., & G., 3528, Oct. 30, Steam-engines, go-
[vernors, &c.

— G., & A. S., 3528, Oct. 30, Steam-engines, go-
[vernors, &c.

Bowers, W. H., & Fyfe, D. A., 2873, Sep. 1, Recovering
[alkali.

Bowker, W. 3, Jan. 1, Looms.

Bowra, M. E., & Wood, T., 228, Jan. 20, Elastic fabrics.

Box, W. W., 1887, May 26, Gas.

Boyd, H., 4179, Dec. 19, Drawing boards.

— J., & T. A., 2226, June 27, Winding yarn or thread.

— R. (*Farinaux, Fichaux, Girol, & Sartoris*), 2951,
[Sep. 8, Furnaces and fire-places.

— T. A., & J., 2226, June 27, Winding yarn or thread.

Boydell, R., 3639, Nov. 8, Regulating flow of liquids.

Boyle, J. (Clark), 1027, Mar. 19, Sewing heavy fabrics.

Boyman, R. B., 3515, Oct. 29, Rotary-engines.

Boytton, L. W., & Holmes, J. E., 98, Jan. 9, Centrifugal
[machines; kilns, &c.

Boys, H. R. A. (Clark), 2807, Aug. 26, Propelling vessels.

Bracewell, J., & Pennett, W., 1117, Mar. 26, Inlaid work, &c.

Brachigny, L. M., & Deschamps, J. E., 2782, Aug. 22,
[Motive-power.

Bradbury, A., 1537, Apr. 28, Furnaces.

— G. F., Chadwick, T., Singleton, T., & Lomax,
[H., 1823, May 20, Sewing-machines.

— G. F., Chadwick, T., Singleton, T., & Lomax,
[H., 3499, Oct. 28, Sewing-machines.

— J., Hall, T., & Smedley, T., 2986, Sep. 11,
[Sheathing ships.

Bradford, T., 3481, Oct. 27, Washing, &c. textile fabrics.

Bradley, C., Smith, B., Stake, J., Tolson, R., & Firth, M.,
[951, Mar. 15, Combing fibres.

— G. A., Broughton, F., & Stephens, R., 649, Feb. 20,
[Locking railway signals, &c.

— H., 2316, July 4, Printing designs, &c. on metal.

— I. (*Berddn*), 2464, July 17, Cartridge cases.

Bradwell, H., 3037, Sep. 22, Umbrella sticks.

Brady, F. H., 4077, Dec. 11, Fire-grates.

— H., 3131, Sep. 25, Warming rooms, &c.

Bragg, J., 1411, Apr. 18, Waterwheels.

Brain, W. B., 2976, Sept. 10, Electric blasting fuses.

Brain, W. B., 2984, Sep. 11, Explosive compound.
 Braithwaite, J. C., & Todd, R., 348, Jan. 29, Weaving carpets.
 Brakell, C., 726, Feb. 27, Exhausting, discharging and [transmitting air, &c.
 — C., 1286, Apr. 8, Peat-fuel.
 — C., 2548, July 26, Weaving.
 Bramhall, H., 3178, Sep. 20, Knives and forks.
 Bramley, E. H., & Green, F. M., 1961, May 31, Easels, [writing tablets, tables, &c.
 Brampton, F., 1104, Mar. 25, Fire-grates.
 Brandt, H. (Wirth), 4222, Dec. 23, Railway breaks.
 Branson, W. P., 3456, Oct. 24, Roasting coffee, &c.
 Brasier, E., 2898, Sep. 3, Road-making.
 Brassat, L. J. M. (Hunt), 3669, Nov. 11, Carpets.
 Brasseur, J., & Wogler, F., 720, Feb. 26, Smoothing glass, [crystal, &c.
 Bray, G., 724, Feb. 27, Clearing tramway tracks.
 — H., 3490, Oct. 27, Gas.
 Breitmayer, E., & Galland, L. H. M. (Johnson), 3375, [Oct. 18, Telegraphic code.
 Brelsford, J., Ashton, R., & Worsley, G., 3557, Nov. 1, [Felt hats.
 Bremerkamp, C., 61, Jan. 6, Treating osier rods, &c.
 Brémond, E., & Ryder, P., 1698, May 10, Preventing col- [lisions on railways.
 Brenton, W., 2913, Sep. 4, Reaping-machines.
 Bresson, A., 1940, May 29, Asphalte.
 Bretonnière, L. M. F., & Croissant, E. (Johnson), 1489, [Apr. 24, Coloring matters.
 Brewer, E. G. (Pasquier), 1631, May 6, Drying or stiffen- [ing tulle, lace, &c.
 — E. G. (Von Zahony), 2912, Sep. 4, Paper-making.
 — E. G. (Henderson & Wright), 3201, Oct. 2, Sew- [ing-machines.
 — E. G. (Appleton), 4232, Dec. 4, Sewing-machines.
 Brewer, R. (Lake), 1769, May 15, Axle-boxes.
 Brickhill, J., Greaves, H., & Pearson, T. T., 2253, June 28, [Woven fabrics.
 Bridge, H., 1513, Apr. 26, Assisting riders to mount.
 Bridges, W. G., & Hutchison, D., 551, Feb. 14, Remov- [ing, &c. incrustation in boilers.
 Bridgett, G. A., 2073, June 11, Expansion gear and go- [vernors.
 Brierley, W., & Smith, E., 689, Feb. 24, Water-gauges; [discharging air from boilers, &c.
 Briggs, J., Willan, R., & Lewis, D., 494, Feb. 11, Sizing [and dressing machines.
 — T., 3447, Oct. 23, Carpets and similar fabrics.
 — T. D., & Mason, C., 3836, Nov. 24, Treating hides [and skins.
 Brimley, C., 235, Jan. 20, Reaping-machines.
 Brin, Q. L., 3477, Oct. 27, Artificial butter.
 Briassard & Letang (Johnson), 3711, Nov. 14, Printing.
 Britten, B., 3750, Nov. 19, Glass.
 Broad, J., 515, Feb. 12, Applying poultices.
 Brock, W. P. (Lake), 1930, May 28, Sewing-machines.
 Brockelbank, T. A., 2817, Aug. 27, Railway couplings.
 — T. A., 3876, Nov. 27, Railway couplings.
 Broel, J., 385, Jan. 31, Air-gas for lighting and heating.
 Bromhead, S. S., 3234, Oct. 6, Rivets, screws, &c.
 Bromley, W. I., Rushton, T. H., & Morris, T. S., 797, [Mar. 5, Spinning, &c.
 Bromley, M., 3819, Nov. 22, Lathes for turning.
 Brook, J., & Wilkinson, J., 415, Feb. 4, Carpets.
 Brookes, A. G. (Geisenberger & Cherpit), 2188, June 23, [Rotary-engines.
 — W. (Wattinne & Roettger), 1357, Apr. 15, Pile [fabrics.
 — W. (De Soignie), 2730, Aug. 18, Railway and [tramway rails.
 Brooks, E. F., & Seal, C. E. (Clark), 2759, Aug. 20, [Gas and water regulators.

Brooks, J. B., & Bull, P., 1501, Apr. 25, Rings for keys, [watches, &c.
 Brooks, J. W. (Morgan-Brown), 822, Mar. 7, Lasting [boots and shoes.
 Brooks, S., Harrison, G., & Goodbehere, T., 1804, May 17, [Spinning, &c.
 Broomhead, G. (Clark), 320, Jan. 27, Scouring, &c. wire.
 Brotherhood, P., 287, Jan. 24, Propelling machinery.
 — P., 2003, June 5, Fluid pressure engines.
 Brough, J., 1312, Apr. 9, Saving life and property at sea.
 Broughton, F., Stephens, R., & Bradley, G. A., 649, [Feb. 20, Locking railway signals, &c.
 Broughton, J. (Newton), 256, Jan. 22, Fire-arms.
 Brown, A. P. (Hyatt), 3007, Sep. 13, Windmills.
 Brown, C., & Holyoake, W., 3723, Nov. 15, Clipping [animals.
 — C., 2156, June 20, Preserving wood.
 — D., 2916, Sep. 4, Stoppering bottles.
 — D. S., 2346, July 7, Motive-power.
 — F., 3915, Nov. 29, Register stoves.
 — F. W., 3439, Oct. 23, Sewing-machine tuckers.
 — G., 426, Feb. 5, Horse-shoes.
 — J., 1629, May 6, Looms.
 — J. H., 1528, Apr. 28, Artificial coal.
 Brown, J. R. (Huntoon), 3762, Nov. 19, Pipe tongs.
 Brown, R., 447, Feb. 7, Stop-valves or taps.
 — S. S., Ayrton, F., & Austin, J., 1632, May 6, [Looms.
 — T. (Dode), 802, Mar. 5, Glass mirrors; grinding, [polishing and engraving glass.
 — T. C., & Biddell, G. A., 1301, Apr. 8, Steam-engines [and boilers.
 — Walter, 1555, Apr. 29, Treating sewage.
 — William, 3858, Nov. 26, Damasks, reps, &c.
 — William, & Johnstone, J., 524, Feb. 12, Ploughs.
 — William A., 2803, Aug. 26, Railway trucks.
 — William Morgan- (Thomas), 612, Feb. 19, Looms.
 — William Morgan- (Giacomini), 687, Feb. 24, Card- [ing-engines.
 — William Morgan- (Littmann), 793, Mar. 5, Ice- [making.
 — William Morgan- (Brooks), 822, Mar. 7, Lasting [boots and shoes.
 — William Morgan- (Von Seilern), 1057, Mar. 21, [Locks.
 — William Morgan- (Richardson), 1111, Mar. 26, [Hydraulic hose.
 — William Morgan- (Weed), 1218, Apr. 2, Cutting [files.
 — William Morgan- (Hersey, Hersey & Gray), [1233, Apr. 3, Granulators.
 — William Morgan- (Canozzi & Schlösser), 1246, [Apr. 3, Verifying positions of rails of rail and [tramways.
 — William Morgan- (Ripamonti & Ripamonti), 1423, [Apr. 19, Aneroid barometers.
 — William Morgan- (Toselli), 1440, Apr. 21, Trans- [mitting motive-power.
 — William Morgan- (Gates & Gates), 1634, May 6, [Axle-boxes.
 — William Morgan- (Dodge), 1901, May 27, Hydrau- [lic hose.
 — William Morgan- (Crowell), 3677, Nov. 11, Paper [bags.
 Browne, A. (Despaquis), 1190, Mar. 31, Photography.
 — A. (Basset), 1362, Apr. 15, Revolvers.
 — A. (Foundries & Forges Co.), 1574, May 1, [Metallic alloys.
 — A. (Dousset), 1892, May 26, Cartridges.
 — A. (De Bejar O'Lawlor), 2327, July 4, Electro- [telegaphy.
 — A. (Berthoud), 2331, July 5, Sheet metal boxes.

- Browne, A. (*Foundries & Forges Co.*), 2335, July 5, [Metallic alloys.
 — A. (*Foundries & Forges Co.*), 3376, Oct. 18, [Heating blast.
 — A. (*Künzli*), 3702, Nov. 14, Joining leather [straps, &c.
 — A. (*Dreyfus*), 4072, Dec. 10, Lubricators.
 — A. (*Durand & Duborget*), 4080, Dec. 11, Boots [and shoes.
 — A. (*Alcan*), 4191, Dec. 20, Removing cotton [from cotton pods.
 — B., 3181, Sep. 23, Locking nuts.
 — J. C., 277, Jan. 23, Propelling vessels.
 — J. C., 636, Feb. 20, Raising, &c. ships' boats.
 — J. C., 4279, Dec. 30, Raising, &c. fluids; lifting, [&c. balloons.
 — W. R., 1795, May 17, Counterbalanced lifting [bridges.
Brownell, H. T. (*Lake*), 2302, July 2, Plating metals.
Brownhill, R. W., 2605, Aug. 1, Weighing-machines.
Brownjohn, J., 3423, Oct. 22, Turnstiles.
Bruce, W. D. (*Batho*), 1809, May 19, Excavating under [water, &c.
Bruneau, E. S. J., & *Blondel J.*, 1558, Apr. 29, Boilers [and furnaces.
Bruneaux, L., & *Demilly G.* (*Henderson*), 1644, May 7, [Hydro-caloric motors.
Brunel-Bodin, L., & *Brunel-Marchand, I. F.* (*Gedge*), [375, Jan. 31, Blocking boots.
Brunel-Marchand, I. F., & *Brunel-Bodin, L.* (*Gedge*), [375, Jan. 31, Blocking boots.
Bruno, A. E., & *Scott, W.*, 3079, Sep. 19, Backsight for [fire-arms.
Brunton, P. G., 2573, July 29, Steam-engines; pumps.
Bruyn Kops, C. M. de, *Martignoni, J.*, & *Liernur, C. T.*, [1648, May 7, Screw cutting gear.
Brydon, R., & *Davidson, J. S.*, 1991, June 3, Drilling [and boring rock, &c.
Buchan, H. P., 3293, Oct. 10, Waterclosets.
Buchanan, J., 752, Mar. 1, Utilising alkali waste.
Buchholz, J. A. A., 3068, Sep. 18, Treating grain.
Buckley, C. & Sawyer, L. L. (*Hughes*), 1017, Mar. 19, [Curtain fixtures.
Buckley, S., 44, Jan. 4, Pipe wrench and cutter.
 — S., *Chadwick, T. H.*, & *Taylor, J.*, 430, Feb. 5, [Charging, &c. gas-retorts.
Buckwell, W. (*Spencer*), 2157, June 20, Railway breaks.
Bull, P., & *Brooks, J. B.*, 1501, Apr. 25, Rings for keys, [watches, &c.
 — T., 280, Jan. 24, Washing-machines.
Bull, W. (*Spencer*), 2546, July 26, Sleepers and fish-joints.
Bullock, A., 171, Jan. 15, Preventing incrustation in [steam-boilers.
Bullock Printing Machine Co. (*Simon*), 958, Mar. 15, [Printing.
Bullough, J., 3648, Nov. 8, Sizing and beaming yarn.
Bullows, A. & J., 1164, Mar. 28, Clipping animals.
 — J. & A., 1164, Mar. 28, Clipping animals.
Buncher, A. J., 1538, Apr. 28, Coating paper, wood, &c.
Bunster, C. E. W. (*Leigh*), 15, Jan. 1, Transporting and [carrying weights, &c.
Buquoy, X., 2393, July 11, Dredging-machines.
Burch, H., & *Wilson, W.*, 2392, July 11, Mowing and [reaping.
 — H., *Battersby, J.*, & *Wilson, W.*, 2687, Aug. 13, [Mowing and reaping.
Burden, S., & *James, J.*, 1095, Mar. 25, Gathering and [tying wheat, &c.
Burdon, W. (*Newton*), 257, Jan. 22, Raising and forcing [liquids.
Barfitt, C., 538, Feb. 13, Removing, &c. incrustation in [steam-boilers.
Burgess, C. (*Mills*), 3589, Nov. 4, Iron and steel.
Burgess, J., 307, Jan. 25, Crochet needle handles.
Burke, M., 1920, May 28, Ships' davits.
Burley, J., 844, Mar. 8, Infants feeding-bottles.
Burnet, J. (*Walker*), 3695, Nov. 13, Ships, boats, &c.
Burnett, W., 1491, Apr. 24, Supplying oil for lubrication.
 — W., 1493, Apr. 24, Utilising dynamic effect of [fluids.
Burns, J. (*Barber & Ingham*), 2711, Aug. 15, Generating [steam.
Burroughes, J. S., 4074, Dec. 11, Billiard rests and boards.
Burrows, O., 2705, Aug. 15, Boot lasting machines.
 — W., & *Green, T.*, 3673, Nov. 11, Lawn-mowers.
Burt, G., 3186, Oct. 1, Lamps.
 — J. U., 57, Jan. 6, Carriages.
Burton, James, 3986, Dec. 4, Window fasteners.
 — James, 4126, Dec. 15, Window fasteners.
 — John, 972, Mar. 17, Pianofortes.
 — John, & *Smith, H.*, 997, Mar. 18, Lace-making.
 — P., 47, Jan. 4, Opening, &c. doors of trains.
 — Richard, & *De Castro, D.*, 1637, May 6, Gas-meters.
 — Robert, & *Greig, D.*, 3940, Dec. 1, Actuating [steam-ploughs, &c.
Bushnell, H., & *Merriman, E. P.* (*Hughes*), 1854, May 22, [Compressed air motors.
Buss, E. (*Tongue*), 3712, Nov. 14, Water-meters.
Bustard, J., 3533, Oct. 30, Coke ovens.
Butchart, W. P., 1987, June 3, Carding fibres.
Butler, J. W., & *Harrison, H.*, 882, Mar. 11, Peat-fuel; [treating clay, &c.
Büttgenbach, F. (*Lake*), 560, Feb. 15, Blast furnaces.
Büttner, F. L. A. (*Simon*), 412, Feb. 4, Tubular boilers.
Bylandt, Count A. de, 3232, Oct. 6, Graphometrical in- [struments.
Byron, G. G. de L. (Arnold), 3247, Oct. 7, Compounding [metals.
 — G. G. de L. (*Arnold*), 3365, Oct. 17, Ordnance, &c.
 — G. G. de L. (*Merrill*), 3483, Oct. 27, Looms.

C.

- Caddick, J. W.*, & *Gerhard, F. W.*, 1477, Apr. 24, Iron [and steel.
Cadett, J. W. T., 4262, Dec. 29, Furnaces and grates.
 — T., 744, Feb. 28, Artificial fuel.
 — T., 1412, Apr. 18, Gas.
Caffall, R. M., 1799, May 17, Preventing back rush of [gas from gasometers; purifying gas, &c.
Cail & Co., & Agudio, T. M. (*Johnson*), 3724, Nov. 15, [Propelling carriages; raising &c. shaft cages.
Cain, T., 2368, July 8, Furnace bars.
Caithness, Earl of, 3433, Oct. 22, Transmitting motion.
Caldbeck, J., 1210, Apr. 2, Fare registers.
 — J., 2715, Aug. 16, Registering passengers in [vehicles.
 — W., 2696, Aug. 14, Water-power engines.
Caldwell, J., & *Muir, H.*, 2381, July 10, Steam-steering [engines.
Callard, T. B., 3254, Oct. 7, Cutting caromel, &c.
Callow, J. J. (*Clark*), 881, Mar. 11, Graining surfaces, &c.
Calver, F., 2800, Aug. 26, Flower-pots.
Calvert, W., 2983, Sep. 11, Sliver cans.
Camacho, J. S. (*Newton*), 3461, Oct. 24, Electro-magnets.
Cameron, J. A., & *Frier, J.* (*Strange*), 381, Jan. 31, [Cotton-presses.
 — J. A., & *Frier, J.*, & *Strange, L.*, 904, Mar. 12, [Cotton-presses.
Cameron, J. G., & *Hastie, J.*, 2613, Aug. 1, Steering [apparatus.
 — W. M., 1581, May 2, Life-rafts.

- Camozzi, & Schlusser* (Morgan-Brown), 1246, Apr. 3, [Verifying the positions of rails of rail and tramways.
- Campana, E. (Pistoresi)*, 2105, June 13, Obtaining fibres.
- Campbell, A. F.*, 2088, June 12, Common road carriages.
- *G. W. R.*, 2805, Aug. 26, Preventing vessels [dragging anchors.
- *H.*, 513, Feb. 12, Manure.
- *M.*, 656, Feb. 21, Fuel.
- Campbell, W. H. W.* (Haseltine), 779, Mar. 4, Holders [for pencils, &c.
- Campbell, W. R., & Parker, J. W.*, 2352, July 8, Gas-burners.
- Campion, W. & W.*, 517, Feb. 12, Knitted or looped [fabrics.
- Canning, Sir S.*, 120, Jan. 11, Ships' telegraphic apparatus.
- *Sir S., & Mayor, E. J.*, 2554, July 26, Pneumatic-telegraphs.
- Capanema, G. S. de*, 4171, Dec. 19, Telegraph insulators.
- Capes, B., Smith, R., Stephenson, W., & Vere, J.*, 4032, [Dec. 8, Ships' capstans.
- Capewell, G. I. (Williams)*, 64, Jan. 6, Nail extractors.
- Capreel, G. G.*, 760, Mar. 1, Gilding or bronzing material.
- Carbonel, M., & Bellour, F. (Clark)*, 4248, Dec. 26, [Teaching music.
- Cardon-Wamain, J. T.*, 203, Jan. 17, Treating fibres.
- Cardozo, H. G.*, 492, Feb. 11, Horse-shoes.
- Careless, I.*, 4006, Dec. 5, Horse-collars.
- Carey, R.*, 2680, Aug. 12, Steam-engines and pumps.
- Carli, J. P., & Cook, J. (Lake)*, 1688, May 9, Rotary-pumps.
- Carly, M. Moncomble- (Lake)*, 4112, Dec. 13, Threshing-machines.
- Carmichael, H.*, 72, Jan. 7, Bleaching, dyeing, and washing.
- *W. S.*, 589, Feb. 17, Ships and vessels.
- Carpenter, J.*, 1481, Apr. 21, Lowering, &c. ships' boats.
- Carpenter, J. H. (Clark)*, 1090, Mar. 24, Sawing mitres, [&c.; obtaining levels; determining angles.
- Carr, D. A., & Barlow, C. P.*, 344, Jan. 28, Railway [signals.
- Carr, G. W., & Kitson, G. L. (Johnson)*, 521, Feb. 12, [Valves.
- *G. W., & Kitson, G. L. (Johnson)*, 3059, Sep. 18, [Valves.
- Carr, T.*, 1417, Apr. 19, Disintegrators.
- *W. R., & Urwin, J.*, 4288, Dec. 31, Boring-machines.
- Carrington, W. T. H.*, 427, Feb. 5, Wire rope transport.
- *W. T. H., & Platt, J.*, 156, Jan. 14, Domestic fire-grates.
- Carron, W.*, 1295, Apr. 8, Fastenings for jewellery, &c.
- Carter, A. E., & Underhay, F. G.*, 3916, Nov. 29, Water-waste preventers.
- *C.*, 2755, Aug. 20, Water-waste preventers.
- *J.*, 2223, June 26, Spinning.
- *J., & J. E.*, 2247, June 28, Stench-traps.
- *J. E., & J.*, 2247, June 28, Stench-traps.
- Carter, J. W. (Lake)*, 1982, June 2, Writing ink.
- Carter, S., & Pickup, A.*, 3881, Nov. 27, Sewing-machines.
- Carto, F. B. (Johnson)*, 4147, Dec. 17, Motive-power.
- Cartwright, J.*, 1427, Apr. 19, Back saws.
- Carver, H. C.*, 2693, Aug. 14, Furnaces.
- Casella, L. P., & Denton, S. G.*, 4219, Dec. 23, Thermometers.
- Casey, T. H., & Liddon, J. J.*, 3130, Sep. 25, Compasses.
- Casper, F. (Farinaux)*, 1405, Apr. 18, Packing.
- *E. (Dezuarte & Farinaux)*, 1636, May 6, Washing.
- *E. (Farinaux)*, 2602, Aug. 21, Feeding boilers.
- Caspers, C.*, 1689, May 9, Purifying crude anthracine.
- Cass, J.*, 2118, June 16, Weaving.
- Casson, R. S.*, 3626, Nov. 7, Puddling furnaces.
- Castelaz, J.*, 4225, Dec. 24, Aniline.
- Castle, J. S.*, 3351, Oct. 16, Butter.
- Castro, A. de S. A. e Condi de Penamacor, Castro, A. P. [de S. e., & Hopcraft, T. S.*, 2484, July 19, Citric [acid; tartaric acid; alcohol.
- *A. P. de S. e., Castro, A. de S. A. e Condi de [Penamacor, & Hopcraft, T. S.*, 2484, July 19, [Citric acid; tartaric acid; alcohol.
- *D. de*, 12, Jan. 1, Gas-meters.
- *D. de, & Burton, R.*, 1637, May 6, Gas-meters.
- Cathcart, J. L., & Negley, J. S. (Mills)*, 431, Feb. 5, [Screw-propellers.
- Catlow, C.*, 2773, Aug. 21, Looms.
- Caton, J.*, 646, Feb. 20, Fire-places.
- *J. B.*, 401, Feb. 3, Apparatus for smokers' use.
- Cattell, T.*, 587, Feb. 17, Purifying gutta-percha.
- Caumon, C. J. (Newton)*, 2874, July 9, Semi-steel rail-way bars, &c.
- Cawthorn, J.*, 3968, Dec. 3, Sashes and frames.
- Cederholm, H. S., & Peterson, C.*, 1394, Apr. 17, Ships' [logs.
- Céré, J. J. R., & Moriarty, E.*, 1686, May 9, Treating [sewage.
- Cerf, le (Petremant)*, 3701, Nov. 14, Dress improvers.
- Chadburn, W.*, 3434, Oct. 22, Governing, &c. speed of [steam-engines.
- Chadwick, T., Singleton, T., Lomax, H., & Bradbury, [G. F.*, 1823, May 20, Sewing-machines.
- *T., Singleton, T., Lomax, H., & Bradbury, [G. F.*, 3499, Oct. 28, Sewing-machines.
- *T. H., Taylor, J., & Buckley, S.*, 430, Feb. 5, [Charging, &c. gas-retorts.
- Chalk, A., & Knowles, M.*, 1356, Apr. 15, Damping warp [in looms.
- *R., & Barnes, T.*, 4069, Dec. 10, Fire-grates.
- Challerton, J. F. F. (Clark)*, 945, Mar. 14, Peat-fuel.
- Chamas, J. F. E., & Bouju, L. & M. R.*, 1208, Apr. 2, [Obtaining textiles.
- Chamberlain, H.*, 623, Feb. 19, Mortar, beton, &c.
- Chamberlin, C. A. (Imray)*, 1945, May 29, Anchors.
- *C. A. (Imray)*, 2647, Aug. 7, Anchors.
- Chambers, G.*, 3406, Oct. 21, Boots and shoes.
- *R.*, 418, Feb. 4, Cleaning grain.
- *R.*, 2619, Aug. 2, Cleaning grain.
- Chambon, V.*, 3926, Dec. 1, Ploughs.
- Chamon, Nicolas, & Co. (Henderson)*, 2259, June 30, [Gauges.
- Chance, G. H. (Coxeter)*, 3572, Nov. 3, Dental instruments.
- Chanel, C.*, 614, Feb. 19, Fuel.
- Chantler, W., Hampson, H., Hellewell, H., & Kenyon, J.* [1899, May 26, Heating hat brims.
- Chantrell, G. F.*, 499, Feb. 11, Storing, cleansing, and [removing house refuse, &c.
- *G. F. (Hope)*, 2707, Aug. 15, Anchors.
- *G. F., & Robey, J.*, 957, Mar. 15, Filtering & [deodorising.
- Chapin, E. P. (Vaughan)*, 1749, May 14, Looms.
- Chapman, C.*, 3058, Sep. 18, Life-boats.
- *E. R.*, 434, Feb. 5, Tuck creaser, &c. for sewing-machines.
- *G., & Denholm, G.*, 1838, May 21, Weighing.
- *L.*, 2281, July 1, Rotary-pumps.
- Chappell, A., & Charlsworth, J.*, 555, Feb. 14, Carding-engines.
- *A., Lockwood, T.*, 4024, Dec. 6, Looms.
- *J. T.*, 796, Mar. 5, Domestic fire-places.
- *T.*, 704, Feb. 25, Oil-gas.
- Charles, P.*, 1614, May 5, Supplying water to closets, &c.
- Charlesworth, G.*, 114, Jan. 11, Power-looms.
- Charlsworth, J., & Chappell, A.*, 555, Feb. 14, Carding-engines.
- Charlton, J. (Mills)*, 2810, Aug. 26, Shaft couplings; [hubs for wheels, &c.

- Charpentier, P., 2941, Sep. 6, Heating furnaces.
 Chastaignt, N. du, & Marville, L. J. C. (Tongue), 2668, [Aug. 9, Seats, &c. for advertising.
 Chatwood, S., 1846, May 21, Safes and chambers.
 — S., 3550, Oct. 31, Locks for safes, &c.
 Cheesbrough, F. J. (Walden), 1453, Apr. 22, Fitting [gores in shoes.
 Cheetham, J., & Bayley, C. H., 475, Feb. 10, Combining- [machines.
 Chelot, L., 3897, Nov. 28, Nails, bolts, &c.
 Cherpit, G., & Geisenberger, E. (Brookes), 2188, June 23, [Rotary-engines.
 Cherry, J., & Wade, J. A., 1781, May 15, Pressing plastic [substances.
 — J., & Wade, J. A., 2298, July 2, Tipping carts.
 Cheshire, J., 3640, Nov. 8, Studs and clasps.
 Chesterman, J. & W., Guy, C., Harling, J., & Marsden, W., [818, Mar. 6, Spinning.
 — W. & J., Guy, C., Harling, J., & Marsden, W., [818, Mar. 6, Spinning.
 Chevalier, J. F., 3137, Sep. 26, Liquid polish.
 Childs, A. B., 2896, Sep. 3, Railway carriage windows.
 Childs, J., Ditchfield, S. J., & Watson, G., 2093, June 13, [Heating apparatus; gaseous fuel.
 — J., Ditchfield, S. J., & Watson, G., 4095, Dec. 12, [Heating apparatus; gaseous fuel.
 Chillingworth, F. (Hughes), 1779, May 15, Spade bayonets.
 — F. (Hughes), 3696, Nov. 13, Spade bayonets.
 Chipperfield, R. G., 3804, Nov. 22, Domestic fire-places.
 Chisholm, J., 1816, Apr. 9, Twiners of doubling machines.
 Chislett, J. R., 87, Jan. 8, Medico-electricity.
 Chodzko, N. F. B. de (Smith), 124, Jan. 11, Steam-boilers.
 Chomel, I. A., 1705, May 10, Ships' berths.
 Christie, H. T., 922, Mar. 18, Saving life at sea.
 — H. T., 2027, June 6, Saving life at sea.
 Ciampanty, C. (Tongue), 4101, Dec. 12, Imitating mar- [ble, &c.
 Ciotti, H., 1550, Apr. 29, Centrifugal and re-acting pump.
 Clapp, W. J., 1900, May 27, Cutting coal, &c.
 Clark, Alexander, 278, Jan. 23, Metallic revolving shutters.
 — Alexander M. (Audouin & Pelouze), 109, Jan. 10, [Condensing liquefiable matters.
 — A. M. (Avery), 189, Jan. 16, Velocipedes.
 — A. M. (Rogé & Baffoy), 237, Jan. 20, Railway [switches and points.
 — A. M. (Broomhead), 320, Jan. 27, Scouring, &c. wire.
 — A. M. (Dean), 355, Jan. 29, Sifting shovels.
 — A. M. (Laurette), 368, Jan. 30, Artificial stone.
 — A. M. (Hannart & Mamelzer), 397, Feb. 1, Ticket- [ing shop goods, &c.
 — A. M. (Levy), 433, Feb. 5, Lining straw-board, &c.
 — A. M. (Tesse, Lartigue & Prud'homme), 490, Feb. 10, [Railway signals.
 — A. M. (Goodwin), 501, Feb. 11, Sewing-machines.
 — A. M. (Gardner), 606, Feb. 18, Governors.
 — A. M. (Margueritte), 682, Feb. 22, Purifying [syrups, &c.
 — A. M. (Grawitz), 708, Feb. 25, Candles, matches, [fire-lighters, &c.
 — A. M. (Callow), 881, Mar. 11, Graining, &c. surfaces.
 — A. M. (Challeton), 945, Mar. 14, Peat-fuel.
 — A. M. (Luxton), 999, Mar. 18, Peat-machines.
 — A. M. (Boyle), 1027, Mar. 19, Sewing heavy fabrics.
 — A. M. (Carpenter), 1090, Mar. 24, Sawing mitres, [&c.; obtaining levels; determining angles.
 — A. M. (Pasteur), 1106, Mar. 25, Brewing.
 — A. M. (Badt), 1193, Mar. 31, Gas.
 — A. M. (Nichols), 1205, Apr. 1, Raising and measur- [ing acids, &c.
 — A. M. (Beery), 1226, Apr. 2, Carriage heads.
 — A. M. (Hillman), 1227, Apr. 2, Cleaning and sepa- [rating ores.
 Clark, A. M. (Taylor), 1241, Apr. 3, Presses.
 — A. M. (Bonnefond), 1330, Apr. 10, Registering [the flow of liquids.
 — A. M. (Digeon & Goldsmith), 1331, Apr. 10, Dyes.
 — A. M. (Debrieu, Pernoud & Co), 1370, Apr. 16, [Preserving substances.
 — A. M. (Howe), 1428, Apr. 19, Cans for preserving [fruit, &c.
 — A. M. (Marble), 1557, Apr. 29, Indigo blue dye.
 — A. M. (D'Argy), 1590, May 2, Cigarette papers.
 — A. M. (Gérard & Thuillier), 1608, May 3, Casks.
 — A. M. (Freudentheil), 1639, May 6, Pianofortes.
 — A. M. (Colacicchi), 1640, May 6, Injectors.
 — A. M. (Planté), 1713, May 10, Lighting lamps, [candles, &c.
 — A. M. (Sheldon), 1746, May 13, Furniture casters.
 — A. M. (Bocquet & Bénard), 1884, May 24, Peat-fuel.
 — A. M. (Stacy), 2012, June 5, Stone cutters.
 — A. M. (Schmidt-Ramsbacher), 2178, June 21, [Tanning, &c.
 — A. M. (Townsend), 2190, June 23, Printing oil- [cloth, &c.
 — A. M. (DeBardel), 2205, June 24, Heating feed-water.
 — A. M. (Taylor), 2269, June 30, Breaks.
 — A. M. (Achar), 2350, July 8, Railway breaks.
 — A. M. (Margueritte), 2413, July 12, Sugar.
 — A. M. (O'Donoghue & O'Donoghue), 2420, July 14, [Tooth-brushes.
 — A. M. (Pavy), 2746, Aug. 19, Granaries, &c.
 — A. M. (Seal & Brooks), 2759, Aug. 20, Gas and [water regulators.
 — A. M. (Boys), 2807, Aug. 26, Propelling vessels.
 — A. M. (Teske), 2824, Aug. 27, Watch regulators.
 — A. M. (Duchamp), 2835, Aug. 28, Umbrella and [parasol frames.
 — A. M. (Hermann), 2963, Sep. 9, Diamond cutting [frames.
 — A. M. (Speer), 2993, Sep. 11, Endless railway or [travelling street side walks, &c.
 — A. M. (Corrigan), 2994, Sep. 11, Screw-valves.
 — A. M. (Drague), 3167, Sep. 29, Reproducing pat- [terns of mouldings, reliefs, &c.
 — A. M. (Crété), 3240, Oct. 6, Gas-regulators.
 — A. M. (Sawyer & Smith), 3317, Oct. 13, Electric- [telegraphs.
 — A. M. (Plass), 3330, Oct. 15, Pianoforte actions.
 — A. M. (Martin), 3353, Oct. 16, Artificial fuel; gas.
 — A. M. (Loiseau), 3419, Oct. 21, Artificial fuel.
 — A. M. (Adams), 3420, Oct. 22, Attachment or [covering for boats.
 — A. M. (GaiFFE), 3449, Oct. 23, Color printing.
 — A. M. (Fitz-Randolph), 3544, Oct. 31, Excavating.
 — A. M. (Borden & Borden), 3675, Nov. 11, Pre- [serving, &c. milk.
 — A. M. (Borden & Borden), 3676, Nov. 11, Con- [densed milk.
 — A. M. (De Saumery), 3835, Nov. 24, Festooned [edging or trimming.
 — A. M. (Vanloo), 3998, Dec. 4, Folding chairs, &c.
 — A. M. (D'Argy), 4012, Dec. 5, Substitute for glass.
 — A. M. (Winters, McGregor, McGregor, & Minis- [ter), 4047, Dec. 8, Hulling maize.
 — A. M. (Douglass), 4247, Dec. 26, Generating steam.
 — A. M. (Bellour & Carbonel), 4248, Dec. 26, Teach- [ing music.
 — A. M. (Jenty), 4294, Dec. 31, Gas and fuel.
 — Archibald, 3417, Oct. 21, Farinaceous compounds.
 — D. K., 1216, Apr. 2, Peat-fuel and peat-charcoal.
 — E., 611, Feb. 18, Raising and lowering ships.
 — F., 1339, Apr. 12, Turnip cutters.
 — G., 286, Jan. 24, Preserving & cooking substances.
 — G., 1761, May 14, Preserving & cooking substances.

- Clark, G., 3442, Oct. 23, Preserving substances.
 — G., 3521, Oct. 30, Preserving & cooking substances.
 — G., 4282, Dec. 31, Pavements.
 Clark, H. A. (Griswold), 4140, Dec. 17, Waterproofing [fabrics].
 Clark, J., 361, Jan. 30, Railway breaks.
 — J. L., 2629, Aug. 5, Recording apparatus for vehicles.
 — J. L. & Standfield, J., 2498, July 19, Hydraulic [apparatus].
 — J. L. & Whitehouse, E. O. W., 4082, Dec. 11, Re-
 [cording number of passengers in public vehicles
 [and distance travelled].
 — M., 2489, July 19, Drying stoves.
 — W., 1228, Apr. 3, Clipping animals.
 — W., 3813, Nov. 22, Moulding fuel, &c.
 — W. (De Boucherville), 2583, July 30, Propelling
 [ships].
 — W. (Lichtenfelder), 2620, Aug. 2, Chairs or seats.
 — W. (Hétiard), 2644, Aug. 6, Propelling vessels.
 — W. & Martin, R., 1696, May 10, Clipping animals.
 Clarke, B., 1175, Mar. 29, Trying-up & surfacing machines.
 — C. L. & Wood, R. (Harrison), 1772, May 15, Feed
 [and low-water signal for steam-boilers].
 — E. & G., & Harold, H. E., 3924, Dec. 1, Econo-
 [mising fuel].
 — G. & E., & Harold, H. E., 3924, Dec. 1, Econo-
 [mising fuel].
 — J. L., 1041, Mar. 20, Fitting candles to candlesticks.
 — J. P., 2795, Aug. 25, Casks and barrels.
 — T. A. W., & Donisthorpe, R. F., 108, Jan. 10,
 [Crimped hair].
 — T. A. W., & Turner, E., 2726, Aug. 16, Packing
 [for glands].
 — T. A. W., & Donisthorpe, R. F., 3869, Nov. 26,
 [Padding cushions, &c].
 — T. A. W., Snowden, W. H., Dearden, B., & Do-
 [nisthorpe, A. R. & G. E., 2439, July 15, Mixed
 [yarns].
 — T. A. W., Donisthorpe, A. R., Corah, E., & Cooper,
 [J. H., 3113, Sep. 23, Knitting-machines].
 — W., & Walker, E., 4149, Dec. 17, Ships' windlasses.
 Clarkson, J., 3964, Dec. 3, Fastening artificial teeth.
 Claude, E. (Newton), 3177, Sep. 30, Folding or pleating
 [paper].
 Claughton, H. O., McClure, W. B., & Graham, J. C.
 [(Haseltine), 13, Jan. 1, Back chain for
 [cart saddles].
 Clayton, E., 3282, Oct. 10, Fermenting dough.
 — G., & Sutcliffe, W., 148, Jan. 14, Miners' safety-
 [lamps].
 — J. W., 1775, May 15, Filling bottles, &c.
 — J. W., 3808, Nov. 22, Waterproof paper.
 — N., & Shuttleworth, J., 1358, Apr. 15, Expan-
 [sion gear].
 — N., & Shuttleworth, J., 1914, May 28, Thrashing-
 [machines].
 Cleathero, E. T., & Arnold, W., 2676, Aug. 12, Vice-chairs
 [for rail and tram-ways].
 Cleaver, J., 685, Feb. 24, Metallic needle cases.
 Clegg, W., 1577, May 1, Etching and engraving.
 Cleminson, J., 3215, Oct. 4, Railway and other carriages.
 Clinch, J. W., 2002, June 5, Gumming labels, &c.
 Clough, C. B., 3460, Oct. 24, Curing smoky chimneys;
 [ventilating apartments, &c].
 — S. W., 1360, Apr. 15, Fire-grates and cement.
 Clough, T. (Kidd), 2017, June 6, Gas-burners.
 Clunes, T., Holland, W., & Dutton, S. T., 2034, June 7,
 [Railway points and signals].
 Cluzet, W., & Simon, A., 3299, Oct. 11, Rules for drawing.
 Contes, G., 3686, Nov. 12, Damping warps.
 Cobby, T. H. (Dixon), 2981, Sep. 11, Treating ores.
 Cochrane, C., 2113, June 14, Treating iron ores.
 Cochrane, H., 1187, Mar. 31, Knives and forks.
 Cochrane, J. (Lake), 1021, Mar. 19, Stay-bolts for steam-
 [boilers].
 Cock, H. (Cock), 3027, Sep. 15, Supporting boilers.
 Cock, S. D. (Cock), 3027, Sep. 15, Supporting boilers.
 Cockayne, B., & Fenton, M., 3354, Oct. 16, Casting metals.
 Cockburn, G., 1980, June 2, Safety-valves.
 Cockcroft, W., & Achroyd, R. (Midgley), 3438, Oct. 22,
 [Twisting fibres].
 Cocker, J., 1084, Mar. 24, Self-acting mules.
 — S., & Terry, C. F., 664, Feb. 21, Detaching ships'
 [boats, engines, carriages, &c].
 Cockey, F. C. & H., 1144, Mar. 27, Grates or stoves.
 — F. C. & H., 4038, Dec. 8, Gas-stoves.
 — H. & F. C., 1144, Mar. 27, Grates or stoves.
 — H. & F. C., 4038, Dec. 8, Gas-stoves.
 Cockshott, R., 567, Feb. 15, Oil or lubricant.
 Codd, H., 75, Jan. 7, Bottles.
 — H., 221, Jan. 18, Tramways.
 — H., & Foster, F., 4268, Dec. 29, Bottles and stoppers.
 Coddington, R. (Gally), 1395, Apr. 17, Telegraphic ap-
 [paratus].
 — T. B. (De Witt & Fairman), 1004, Mar. 19,
 [Blocks, slabs, pillars, tubes, &c].
 Coey, J., 2867, Aug. 30, Butter package.
 — J., 3570, Nov. 3, Butter package.
 — J., & Wotherspoon, J., 2575, July 29, Packing
 [butter].
 Coffee, W. F. (Lake), 1554, Apr. 29, Printing telegraphs.
 Cogswell, E. R., 2495, July 19, Life-preservers.
 Cohrs, J. H., 2630, Aug. 5, Pistons.
 — J. H., 3775, Nov. 20, Railway couplings.
 Coignet, Son & Co. (Johnson), 305, Jan. 25, Manure.
 Colacicchi, R. (Clark), 1640, May 6, Injectors.
 Colani, T., & Kruger, A., 3949, Dec. 3, Saccharification
 [of grains].
 Colborne, Hon. J., & Alcock, Lady L., 4127, Dec. 15,
 [Actuating sewing-machines].
 — Hon. J., & Barrington, F. L., & Weatherdon,
 [B. F., 2462, July 16, Propelling ships].
 Coldwell, I. B., 3870, Nov. 26, Motive-power.
 Cole, F., 2418, July 14, Crushing baryta, cocoa, sugar, &c.
 — F., 2772, Aug. 21, Railway signalling.
 — F., & Acton, R. G., 110, Jan. 11, Air-engines.
 — F., & Acton, R. G., 2276, July 1, Air-engines.
 — J. W., & Walker, J. E., 3276, Oct. 9, Screening &
 [picking coals].
 Colebrook, C. T., 2033, June 7, Steam-pumps & engines.
 — C. T., 2164, June 20, Steam-pumps & engines.
 Coleman, W. J., 2585, July 30, Preserving food.
 Coley, J., Robson, J. G., & Price, J., 2505, July 22, Pud-
 [dling furnaces].
 Colfs-Heyne, J. F. (Hunt), 425, Feb. 5, Kilns.
 Colles, A. H., 3512, Oct. 29, Scoring billiards.
 Collet, & De Lavillasse (Henry), 650, Feb. 20, Treat-
 [ing marine plants].
 Collet, A., & De Lavillasse, P., 4135, Dec. 16, Incinerat-
 [ing sea-weed, &c].
 — A., & De Lavillasse, P., & Testud de Beauregard,
 [F. A., 4166, Dec. 18, Treating sea-weed, &c].
 Collett, J. K. (Bennett), 825, Mar. 7, Packing & preserv-
 [ing hams, &c].
 Collier, E., 663, Feb. 21, Domestic fire-places.
 Collier, T., 2740, Aug. 19, Umbrellas.
 Collingridge, A., 3830, Nov. 24, Refining lubricating oils.
 Collins, C., 3683, Nov. 12, Match-boxes.
 — C. U., & Arnot, J., 462, Feb. 8, Lock and latch
 [furniture].
 — J., & Marsden, J., 2317, July 4, Manure.
 Colls, F. W., 1469, Apr. 23, Treating rosin oil.
 — F. W., 1533, Apr. 28, Gas.
 Combe, J., 2289, July 2, Winding cops.

- Comber, W. A., 2400, July 11, Spanners or wrenches.
 — W. A., 3659, Nov. 10, Spanners or wrenches.
 Comstock, C. C., & Mooney, J. H. (Lake), 1283, Apr. 7, [Sewing-machines.
 Conder, E., & Harrison, B., 32, Jan. 2, Motive-power.
 Condict, N. W., Stevens, W. J., & Steele, D. S. (Johnson), [3052, Sept. 17, Valves.
 Condit, F., 2829, Aug. 27, Weaving.
 Connon, J. W., 3050, Sept. 17, Seat and desk.
 Conradi, H., 3124, Sep. 24, Call-bells.
 Cousterdine, J., & Spencer, J., 631, Feb. 20, Weighing- [machines.
 Coogan, W. J., 899, Mar. 12, Leather.
 Cook, H. W., 986, Mar. 17, Steam-engines.
 — H. W., 3559, Nov. 1, Working railway breaks.
 Cook, J., & Carll, J. P. (Lake), 1688, May 9, Rotary- [pumps.
 Cook, W., 408, Feb. 3, Suspended wheels.
 Cooke, B., 3705, Nov. 14, Counting apparatus.
 — B. G. D., 2403, July 12, Wagons.
 — C. W., 1903, May 27, Winding electro-magnets.
 — E., 3266, Oct. 9, Tobacco-pipes.
 — E. J. W., & Emary, J. L., 2445, July 16, Optical [instruments.
 — H., 3349, Oct. 16, Converting Bessemer steel [rail ends into strips, &c.
 — J., & Hibbert, G., 2570, July 29, Turbines.
 Cookerly, M. (Haseltine), 459, Feb. 8, Hoes.
 Cooley, Le R. C., & Jones, A. T. (Lake), 2220, June 26, [Preserving meat, fruit, &c.
 Coombe, G. J., 1673, May 8, Boats; lowering boats.
 — J. C., 3382, Oct. 18, Pig-iron.
 Cooper, C., 1483, Apr. 24, Washing fabrics.
 — G. B., 991, Mar. 18, Stoves and fire-places.
 — J., 16, Jan. 1, Casting metals.
 — J. H., Clarke, T. A. W., Donisthorpe, A. R., & [Corah, E., 3113, Sep. 23, Knitting-machines.
 — T. P., 653, Feb. 21, Closing and fastening railway [carriage doors.
 Cope, E., & Maxwell, J. R. (Benson), 1387, Apr. 17, [Steam pumping machinery.
 Corah, E., Cooper, J. H., Clarke, T. A. W., & Donis- [thorpe, A. R., 3113, Sep. 23, Knitting-machines.
 Corbett, S., 935, Mar. 14, Ploughs.
 — T., 2604, Aug. 1, Ball joints.
 Corbitt, W., 677, Feb. 22, Stove grates.
 Corliss, S. G. (Lake), 300, Jan. 25, Clothes wringers.
 Cornelius, G. F., 3036, Sep. 16, Compound for lubricating [and grinding.
 Cornely, E. (Gedge), 2395, July 11, Overseaming and [embroidering.
 — E. (Gedge), 3989, Dec. 4, Embroidering and [braiding.
 Cornforth, J., 4057, Dec. 9, Cut nails and tacks.
 Cornish, K. H., & Strange, A., 1559, Apr. 30, Spinning.
 Corrigan, J., & Stubbs, J., 2201, June 24, Winding [yarns, &c.
 — J., & Stubbs, J., 3122, Sep. 24, Winding [yarns, &c.
 Corrigan, P. (Clark), 2994, Sep. 11, Screw-valves.
 Corrin & Vignat (Ray), 3615, Nov. 6, Dyeing textile [fabrics.
 Cort, J., 1545, Apr. 29, Drilling and tapping cast-iron [main pipes.
 Corvin, J., & Grimm, L. (Hughes), 700, Feb. 25, Warm- [ing and heating.
 Cory, J. M., 1240, Apr. 3, Instrument for drawing.
 Côte, P. (Johnson), 2486, July 19, Motive-power.
 Cottam, E., 3065, Sep. 18, Safes.
 — G. H., & Stubbs, F. H., 910, Mar. 13, Coal- [cutting.
 Cottingham, G. W., 3759, Nov. 19, Ironing clothes.
 Cotton, J. A., 3522, Oct. 30, Providing foothold for horses.
 — R. T., & Johnston, F., 1202, Apr. 1, Looms.
 — S., 2043, June 9, Hackling-machines.
 Cottrell, H. (Johnson), 4102, Dec. 13, Cutting, &c. stone.
 Cottrell, W. C., 2666, Aug. 9, Straw-elevators.
 Coubro, T. P., 185, Jan. 16, Ships' sails.
 Couette, A. (Gedge), 1418, Apr. 19, Tents.
 Couhault, M. J. B., & Bouttier, L. (Newton), 3951, [Dec. 2, Sheep-shears.
 Couillard, E. (Newton), 2642, Aug. 6, Moulding bricks, &c.
 Coulter, J., & Fawcett, T., 159, Jan. 15, Governors.
 — J., Oldroyd, J. & M., & Woodcock, J., 898, [Mar. 12, Dyeing, bleaching, &c. fabrics.
 — J., Oldroyd, J. & M., & Woodcock, J., 4157, [Dec. 18, Dyeing, bleaching, &c. fabrics.
 Courtenay, G. (Soul), 2362, July 8, Reefing sails.
 Courtenay, R. H., 1450, Apr. 22, Magneto-electric in- [duction machine.
 — R. H., & Moore, S. J., 3078, Sep. 19, Electro- [magnets.
 Courvoisier, O. (Goettler), 1114, Mar. 26, Keyless watches.
 Couteau, L. A. (Bonneville), 2948, Sep. 8, Sowing potatoes.
 Coventry, A., & Smith, W. F., 3878, Nov. 27, Tools for [turning, screwing, drilling, &c.
 Covert, H. C. (Newton), 1541, Apr. 28, Brush-making.
 Cowan, J., 500, Feb. 11, Heating greenhouses, &c.
 — J., 1665, May 8, Heating greenhouses, &c.
 Cowdery, G., 1680, May 9, Bricks, kilns and buildings.
 Cowins, R. H., 3041, Sep. 18, Switch locking apparatus.
 — R. H., 4187, Dec. 19, Railway switches.
 Cowles, E., 99, Jan. 10, Cooling candle moulds.
 Cowper, E. A., 131, Jan. 13, Sewing boots and shoes.
 — E. A., 1413, Apr. 18, Casting steel ingots.
 — E. A., 1822, May 20, Sewing boots and shoes.
 — E. A., 2827, Aug. 27, Casting steel ingots.
 Cox, J. & S., 214, Jan. 18, Extracting and recovering [oils, fats, &c.
 — S. & J., 214, Jan. 18, Extracting and recovering [oils, fats, &c.
 — S. F., & Pitt, R., 273, Jan. 28, Leather.
 — S. H. F., 2483, July 19, Separating matters of dif- [ferent specific gravities.
 — T. N., & Baker, J. L., 1731, May 12, Horse-hoes.
 Coxeter, J., 302, Jan. 25, Administering nitrous oxide gas.
 — J. (Chance), 3572, Nov. 3, Dental instruments.
 Coxhead, C. J., 2136, June 18, Damper action in pianofortes.
 Crabtree, W., Bottomley, W. H., Shackleton, J., & Nay- [lor, J., 4162, Dec. 18, Looms.
 Craig, J. & M., 1840, May 21, Churns.
 — M. & J., 1840, May 21, Churns.
 Cramp, A. H., 2260, June 30, Lanterns.
 Cramp, A. H. (Schlesinger), 2679, Aug. 12, Toys.
 Cramp, C. C., 1955, May 30, Carriage washing brushes.
 — C. C., 2179, June 23, Locomotive-engines.
 — C. C., 2180, June 23, Rotary steam-engines.
 — C. C., 2341, July 7, Tram and railway cars.
 Crampton, T. R., 3687, Nov. 12, Iron and steel; furnaces.
 Crane, E. A., 3094, Sep. 20, Economising heat; warming [and ventilating.
 Cranston, J. G., 1455, Apr. 22, Boring minerals.
 Craven, J., Fox, S., & Tannett, J. T., 1847, May 21, [Turning, planing and boring.
 — T. C., 22, Jan. 2, Ginning cotton.
 Crawford, H. & J., 3694, Nov. 13, Finishing thread, &c.
 — J. & H., 3694, Nov. 13, Finishing thread, &c.
 Crawley, E. W., 2701, Aug. 15, Decanting liquids.
 Crawshaw, G. W., 1239, Apr. 3, Open fire-places.
 Creese, M. J., 3646, Nov. 8, Brooches, &c.
 Crespin, A. A., 2172, June 21, Transmitting dispatches.
 Crestadoro, A., 3798, Nov. 21, Domestic fire-grates.
 Crété, J. A. (Clark), 3240, Oct. 6, Gas-regulators.
 Cribb, W., & Rackham, J., 3326, Oct. 14, Matches.

Crichton, S. W. & W. W., 950, Mar. 15, Forming lap in [lap-machines, &c.]
 — W. W. & S., 950, Mar. 15, Forming lap in [lap-machines, &c.]
 — W. W., S. & W., 950, Mar. 15, Forming lap in [lap-machines, &c.]
 Crispin, W. H., 122, Jan. 11, Furnaces.
 — W. H., 1349, Apr. 14, Ships and sails.
 — W. H., 1797, May 17, Masts, spars & signal posts.
 Critcherson, G. P. (Haseltine), 2911, Sep. 4, Burnishing [photographs].
 Critchlow, T., 1351, Apr. 14, Piston-valves.
 Croft, A., 2384, July 10, Dyeing leather.
 — J. McG., 3103, Sep. 22, Carriage buffers.
 Croger, T. R., 3784, Nov. 20, Umbrellas and parasols.
 Croissant, E. & Brettonière, L. M. F. (Johnson), 1489, [Apr. 24, Coloring matters].
 Croll, A. A., 45, Jan. 4, Distilling liquors, &c.
 — A. A., & Dalgairns, D. C., 2608, Aug. 1, Sulphur ores.
 Crookes, W., 2790, Aug. 23, Artificial manure.
 Crooksey, J. R., 2115, June 16, Pavements.
 Crosland, J. S., 1249, Apr. 4, Steam-boilers.
 — J. S., 2614, Aug. 2, Steam-boilers.
 — J. S., 4239, Dec. 24, Furnaces.
 Cross, C., 2845, Aug. 29, Velvets and other pile fabrics.
 Crossland, J., 4122, Dec. 15, Warming buildings.
 Crossley, T. (Lake), 2292, July 2, Printing carpets.
 — T. (Lake), 2293, July 2, Carpets.
 — T. (Lake), 2294, July 2, Carpets.
 Crundace, W. S., 977, Mar. 17, Dumb compasses.
 — W. S., 1679, May 9, Pointing ordnance by night.
 — W. S., 1719, May 12, Ships' compasses.
 — W. S., 2034, Aug. 6, Night sight for rifles, &c.
 Crowell, L. C. (Morgan-Brown), 3677, Nov. 11, Paper-bags.
 Crowley, E., 1826, May 20, Fire-arms.
 — J., 2820, Aug. 27, Grinding and polishing.
 Crowther, C., & Morgan, T. M., 2839, Aug. 28, Coating metals.
 — E., & Wilkinson, C. H., 3593, Nov. 4, Rail and [tramway points].
 Cubitt, G., 1393, Apr. 17, Double furrow ploughs.
 Cuff, A. St. G., & Stenson, R., 1466, Apr. 23, Peat-fuel.
 Cullen, T., 1576, May 1, Raising and lowering ships' boats.
 Culpin, T., 2131, June 17, Reaping and mowing.
 Cumine, J. A., 3102, Sep. 22, Exhibiting photographs, &c.
 Cumming, J., 267, Jan. 23, Feeding paper to machines.
 — J., 2538, July 25, Feeding paper to machines.
 Cumming, W. G., 2765, Aug. 21, Sewing-machines.
 Cunliffe, W., 2802, Aug. 26, Metallic articles & structures.
 Cunningham, H. D. P., 2379, July 9, Working projectiles.
 — H. D. P., 3618, Nov. 6, Working ships' yards.
 — W., 3962, Dec. 3, Carding fibres.
 Curie, P., 4181, Dec. 19, Evaporating water, sewage, &c.
 Currer, D., 2008, June 5, Cultivating land.
 Curtis, C. E., 1291, Apr. 8, Front-lighted carriages.
 — F. (Gould), 769, Mar. 3, Paper-making.
 — F. (Haynes), 1910, May 27, Clothes wringers.
 — F. (Mills), 1924, May 28, Steam-boilers & engines.
 — F. (Ross), 2238, June 27, Sewing-machines.
 — F. (Field), 2389, July 10, Cutting precious stones.
 Cutter, J. M. (Willis), 1646, May 7, Valves.
 Cutting, F. (Blake), 3243, Oct. 6, Carburetting, &c. air.

D.

Daelen, R. (Rochussen), 562, Feb. 15, Iron and steel.
 Daelen, V., 484, Feb. 10, Wheel tyres, hoops and rings.
 Dale, John & R. S., 3191, Oct. 2, Evaporating, &c.

Dale, Josiah, & Williamson, R., 3270, Oct. 9, Raising & [lowering salt, &c.]
 — R. S., & J., 3191, Oct. 2, Evaporating, &c.
 Dalgairns, D. C., & Croll, A. A., 2608, Aug. 1, Sulphur [ores].
 Dallemagne, A. J., & Triboulet, L. (Gedge), 1143, Mar. 27, [Photographic glasses].
 Damien & Kister (Johnson), 1390, Apr. 17, Pulleys and [blocks].
 Damoiseau, A. E., 4103, Dec. 13, Sesquichloride of carbon.
 Dana, G. H. (Smith), 1120, Mar. 26, Flour.
 — G. H. (Smith), 2274, July 1, Flour.
 Dangoise, F. (Haddan), 790, Mar. 5, Envelopes.
 — F. (Haddan), 2900, Sep. 3, Closing envelopes.
 Daniels, E. la P., 2631, Aug. 5, Articles of dress.
 Danks, S., 3566, Nov. 1, Rotary furnaces.
 — S., 3577, Nov. 3, Heating furnaces.
 Darby, F. S. S., & Hobrow, W. F., 2858, Aug. 30, Sawing [stone].
 Dargue, W., 2036, June 7, Dyeing fibrous substances in [the hank or skein].
 Darling, W., & Sellers, R., 572, Feb. 15, Cleaning, &c. [teeth of wheels and racks].
 Darlington, F. A., & Scott, F., 3636, Nov. 8, Charging, [&c. gas retorts].
 — J., 1168, Mar. 29, Valves, &c. for rock boring [engines].
 — J., 1734, May 13, Drilling or boring rocks.
 Darlow, W., & Fairfax, H., 3736, Nov. 18, Magneto- [electric apparatus for curative purposes].
 Darwin, S. B., 896, Mar. 12, Gas.
 Daudenart, L. G. G., & Verbert, E. (Hughes), 938, Mar. 14, [Baryta & strontia].
 — L. G. G., & Verbert, E. (Hughes), 939, Mar. 14, [Treating liquors used in scouring wool].
 — L. G. G., & Verbert, E. (Hughes), 3013, Sep. 13, [Baryta & strontia].
 — L. G. G., & Verbert, E. (Hughes), 3014, Sep. 13, [Treating liquors used in scouring wool].
 Dauthendey, C. (Wirth), 3842, Nov. 25, Viewing photo- [graphs].
 Davey, J., 1315, Apr. 9, Steam-generators.
 — S., & Watson, J., 1267, Apr. 5, Safety lighters for [charges].
 — W. H., 722, Feb. 26, Washing and starching.
 David, P. I. (Johnson), 3190, Oct. 2, Ozone.
 — P. I., & Fichet, J. (Johnson), 1222, Apr. 2, Ozone.
 Davidson, C., & Williams, C. D., 3286, Oct. 10, Signalling [in trains; breaks].
 Davidson, J. R. (Johnson), 2438, July 15, Steam washing [apparatus].
 Davidson, J. S., & Brydon, R., 1991, June 3, Drilling & [boring rock, &c.]
 Davies, A., 1160, Mar. 28, Furnace dampers.
 — E., & Dawson, S., 4064, Dec. 10, Heating feed- [water].
 — E., & Walker, T. J., 2914, Sep. 4, Heating feed- [water].
 — G., 3146, Sep. 26, Fringing fabrics.
 — G. (De Saumery), 2847, Aug. 29, Festooned [edging or trimming].
 — G., & Hamblet, J., 780, Mar. 4, Bricks, tiles, [pipes, &c.]
 — P. J., 1579, May 2, Controlling, &c. flow of fluids [and liquids].
 — R. V., 210, Jan. 18, Water-waste preventers.
 — W., 2345, July 7, Window-blind pulleys.
 — W., 3707, Nov. 14, Hinges.
 — W. H., & Higgins, F. H. W., 2576, July 29, Tele- [graphs].
 Davis, C., 353, Jan. 29, Preventing ships foundering.
 — C., 354, Jan. 29, Saving life, &c. at sea.

Davis, G., 162, Jan. 18, Ships davits.
 — G., 1515, Apr. 26, Ship and boat keels.
 — H. T., 3277, Oct. 9, Safety apparatus for hoists, &c.
Davis, James, & Armstrong, J. (Haseltine), 2353, July 8, [Tanning].
 Davis, John, 1861, May 22, Steam-boiler injectors.
 — John, 3995, Dec. 4, Lubricators.
 Davison, T., 2140, June 18, Spring safety-valves.
 Dawes, W., 1259, Apr. 4, Sash-fasteners.
 — W., 3337, Oct. 15, Musical instruments.
 — W., & Ramsden, E. A. 3860, Nov. 26, Passenger [register for vehicles].
 Dawson, D., & Slater, C., 4043, Dec. 8, Dyeing.
 — G., & Newton, T. C., 1176, Mar. 29, Kitchen-ranges.
 — J., & T. G., 8182, Oct. 1, Printing.
 — S., & Davies, E., 4064, Dec. 10, Heating feed-water.
 — T. G. & J., 3182, Oct. 1, Printing.
 Day, E., & Turner, H., 1328, Apr. 10, Steam-boilers.
 — J., & Walker, B. P., 3089, Sep. 20, Blower for [kitchen-ranges].
 — S. J. V. (*Henderson*), 1850 May 22, Railway bars, [beams, &c].
 Deacon, G. F., 937, Mar. 14, Measuring flow of water in [pipes].
 — G. F., 4264, Dec. 29, Measuring flow of water [in pipes].
 — H., 505, Feb. 11, Chlorine.
 — H., 3092, Sep. 20, Alkali.
 — H., 3253, Oct. 7, Chlorine.
 — H., 3336, Oct. 15, Alkali.
 — O. D., 1542, Apr. 28, Ships' boats.
 Deakin, F., 672, Feb. 22, Puddling furnaces.
 Dean, E., 996, Mar. 18, Making ships, boats, &c. buoyant.
 Dean, G. W. (Clark), 855, Jan. 29, Sifting-shovels.
 Dean, H., 849, Mar. 10, Drain-traps.
 — J., 2731, Aug. 18, Fire-places.
 Dean, S. (Haseltine), 259, Jan. 22, Dressing mill-stones.
 Dean, W., 3587, Nov. 4, Ornamenting or graining wood, &c.
 — W., & Lancaster, R., 442, Feb. 6, Gas-regulators.
 — W., & Keighley, J., 657, Feb. 21, Raising beer, &c.
 Dearden, B., Donisthorpe, A. R. & G. E., Clarke, T. A. W., [& Snowden, W. H., 2439, July 15, Mixed yarns].
 — E., 3873, Nov. 27, Winding apparatus for [mines, &c].
 D'Argy, E. A. G. (Clark), 1590, May 2, Cigarette papers.
 — E. A. G. (Clark), 4012, Dec. 5, Substitute for [glass].
 Dearnaley, J., & Potter, W. J., 3511, Oct. 29, Railway [chairs].
 D'Arros, C. H. O. Hallez, 1000, Mar. 18, Magneto-electric [engines].
 De Bardel, H. (Clark), 2205, June 24, Heating feed-water.
 De Bastos, A. A. R., 1856, May 22, Advertising.
 De Beauregard, F. A. Testud, Collet, A., & De Lavillasse, P., [4166, Dec. 18, Treating sea-weed, &c].
 De Bejar O'Lawlor, L. (Browne), 2327, July 4, Electro- [telegraphy].
 Debenham, A., 502, Feb. 11, Undershirts and waistcoats.
 — W. E., 975, Mar. 17, Raising and lowering [submerged vessels, &c].
 De Bettignies Bros., Robey, C., Banks, E., & Forester, T., [970, Mar. 15, Kilns].
 De Boucherville, G. B. (Clark), 2583, July 30, Propelling [ships].
 De Bruyn Kops, C. M., Martignoni, J., & Liernur, C. T., [1648, May 7, Screw-cutting gear].
 De Bylandt, Count A., 3232, Oct. 6, Graphometrical in- [struments].
 De Capanema, G. S., 4171, Dec. 19, Telegraph insulators.

De Castro, D., 12, Jan. 1, Gas-meters.
 — D., & Burton, R., 1637, May 6, Gas-meters.
 De Chodzko, N. F. B. (Smith), 124, Jan. 11, Steam- [boilers].
 Dee, H. W., 3818, Nov. 22, Hinges for cigar-cases, &c.
 Decley, J., & Edge, J. S., 1422, Apr. 19, Fire-arms.
 D'Epineuil, E. L. H. J., Count, 829, Mar. 7, Stoves.
 De Faucheux D'Humy, P. R., 2457, July 16, Inkstands.
 — P. R., 2465, July 17, Tea and [coffee caddies].
 — P. R., 2536, July 25, Calendars.
 — P. R., 2640, Aug. 6, Bottle- [stoppers].
 — P. R., 4000, Dec. 5, Fastening [for bottle-stoppers, &c].
 Defeher, A. A., 311, Jan. 27, Shaping, &c. butter & pastry.
 Defries, H. (*Schulzer & Co.*), 4213, Dec. 23, Chimneys [for lighthouse lamps].
 Defty, H., 1602, May 3, Scraping and cleansing sides and [bottoms of ships, &c].
 De Gendre, P. P. E., Count, 4215, Dec. 23, Armour.
 De Grouilliers, H., & Siemens, G. (Abel), 2838, Aug. 28, [Soda and potash].
 D'Humy, P. R. de Faucheux, 2457, July 16, Inkstands.
 — P. R. de Faucheux, 2465, July 17, Tea and [coffee caddies].
 — P. R. de Faucheux, 2536, July 25, Calendars.
 — P. R. de Faucheux, 2640, Aug. 6, Bottle-stoppers.
 — P. R. de Faucheux, 4000, Dec. 5, Fastening for [bottle-stoppers, &c].
 Deighton, W., 3672, Nov. 11, Steel.
 Deininger, A., 2601, Aug. 1, Preparing fibres for spinning.
 De Kercado, G. T. (Gedge), 104, Jan. 10, Water-meters.
 De Labarre, E., & Snoeck, A. (Hughes), 321, Jan. 27, [Threads].
 De Lacauve, H. C., & Gilquin, L. (Mewburn), 3339, [Oct. 15, Fire-escapes].
 Delalot, S. L., 3268, Oct. 9, Iron and steel.
 — S. L., 3322, Oct. 14, Coating iron with silver, &c.
 De Larret, L. Paguette (Gedge), 1907, May 27, Mowing [and reaping, &c].
 De La Rue, W. W., 2571, July 29, Rotating calendars.
 — W. W., & Lancaster, G., 639, Feb. 20, Scoring [games].
 De Laskarzewski, C. A., & Noyes, T. H., 1470, Apr. 23, [Musical instruments].
 Delavault, J. B., 3987, Dec. 4, Advertising envelope, &c.
 De Lavillasse, & Collet (Henry), 650, Feb. 20, Treat- [ing marine plants].
 De Lavillasse, P., & Collet, A., 4135, Dec. 16, Incinerating [sea-weed, &c].
 — P., Testud de Beauregard, F. A., & Collet, [A., 4166, Dec. 18, Treating sea-weed, &c].
 Delessert, H. E., 157, Jan. 15, Carriages.
 Delmas, F., & Piquemal, J., 1459, Apr. 22, Sunshades.
 De Lorie, C. E., 2902, Sep. 3, Transmitting, &c. motive- [power].
 Delrieu, B., & Pernoud, J. M. & Co. (Clark), 1370, [Apr. 16, Preserving substances].
 De Lungo, U. (*Turdani*), 3633, Nov. 7, Soap.
 Demailly, G. (Henderson), 591, Feb. 18, Filters.
 — G., & Bruneaux, L. (Henderson), 1644, May 7, [Hydro-caloric motors].
 De Malortie, C. Baron, & Woods, J. T., 1006, Mar. 19, [Furnaces].
 De Meritens, A., & Kresser, V. (Johnson), 3937, Dec. 1, [Paper-pulp].
 De Mestre, J. A. (Bonneville), 1036, Mar. 20, Corking [bottles].
 De Moncie, Baron T., 1094, Mar. 25, Cutting wood.
 De Mutrécy, Count C. (Gilbee), 2940, Sep. 6, Hydraulic- [engines].

- De Mutrécy, Count C., & Piatti, T.* (Newton), 1834,
[May 20, Hydraulic-engines.
- Den Bergh, J. van,* 8, Jan. 1, Harness.
- Denby, W. S., & Erskine, F.,* 192, Jan. 17, Stench-traps.
— *W. S., & Erskine, F.,* 312, Jan. 27, Steam-boilers.
- Dence, J., & Keen, P.,* 1732, May 12, Elevators.
- De Negri, C.,* 1437, Apr. 21, Engines.
- Denholm, G., & Chapman, G.,* 1838, May 21, Weighing.
- Dening, F.,* 1958, May 30, Seed and manure drills.
- Denley, J.,* 1381, Apr. 16, Fire-places or grates.
- Denne, M. C. & T. J.,* 3451, Oct. 23, Soleing boots, &c.;
[sewing.
- *T. J. & M. C.,* 3451, Oct. 23, Soleing boots, &c.;
[sewing.
- Dennell, J., & Greenwood, J.,* 2774, Aug. 21, Perforating
[leather, &c.
- Dennis, T. H. P., & Portway, C.,* 2426, July 14, Green-
[houses.
- *W.,* 301, Jan. 25, Fire-extinguishers, &c.
- Dennison, J. T.,* 530, Feb. 13, Fire-places, flues and grates.
- Densmore, E., & Farnham, C. H.,* 668, Feb. 22, Type-
[writing machines.
- Dentith, T.,* 3446, Oct. 23, Indigo blue dye.
- Denton, S. G., & Casella, L. P.,* 4219, Dec. 23, Thermometers.
- Deplechin, J. B., & Mathelin, P. L.* (Mewburn), 409,
[Feb. 4, Cocks.
- Deprez, M.* (Henry), 2876, Sep. 1, Steam-engines.
- Deregnacourt, A.* (Seiferheld), 103, Jan. 10, Boots and
[shoes.
- Derham, T. S.* (Morand), 411, Feb. 4, Kilns.
- Dering, G. E.,* 4228, Dec. 24, Rail & tramway rails & joints.
- Derney, A. J.,* 1468, Apr. 23, Raising sunken ships.
- De Rutenberg, Baron V.* (Murdoch), 360, Jan. 30, Ex-
[plosive compounds.
- De St. Ange, Guerriero, A., Comte* (Touaillon), 2184,
[June 23, Horse-shoes.
- De Saldanha Albuquerque, e Castro, A. Condi de Pena-*
[maçor, *De Sande e Castro, A. P., & Hoperaft, T. S.,*
2484, July 19, Citric acid; tartaric acid; alcohol.
- De Sande e Castro, A. P., Hoperaft, T. S., & De Saldanha*
[Albuquerque, *e Castro, A. Condi de Penamaçor,*
2484, July 19, Citric acid; tartaric acid; alcohol.
- De Saumery, N.* (Davies), 2847, Aug. 29, Festooned
[edging or trimming.
- *N. (Clark),* 3835, Nov. 24, Festooned edging
[or trimming.
- De Savignon, L. A. Autueil* (Henry), 667, Feb. 21, Sugar.
- Deschamps, J. E., & Brachigny, L. M.,* 2782, Aug. 22,
[Motive-power.
- Deshayes, A. V.,* 3073, Sep. 18, Embroidering-machines.
- Deshayes, V. A.* (Newton), 3634, Nov. 7, Embroidering-
[machines.
- Desmares, A. P. F.,* 1378, Apr. 16, Producing relief
[designs.
- De Soignie, E. E.* (Brookes), 2730, Aug. 18, Railway &
[tramway rails.
- Despaquis, P. A.* (Browne), 1190, Mar. 31, Photography.
- Destibeaux, J. H.* (Henry), 4211, Dec. 23, Soap.
- Destouy, A.,* 2768, Aug. 21, Cigar-holders.
- De Telescheff, N.* (Mennons), 2310, July 3, Steam-engines.
- Detraux, H.* (Mewburn), 2323, July 4, Spinning.
- Dewar, W.,* 1432, Apr. 21, Planting potatoes.
- De Ware, A. A.,* 304, Jan. 25, Umbrella and parasol frames.
- Dewe, J.* (Smith), 1956, May 30, Economising fuel.
- De Witt, G., & Fairman, J.* (Coddington), 1004, Mar. 19,
[Blocks, slabs, pillars, tubes, &c.
- Dezarte, E., & Farinaux, J.* (Casper), 1636, May 6,
[Washing.
- Dick, W. B.,* 362, Jan. 30, Extinguishing fires.
- Dickinson, E.,* 3896, Nov. 28, Moulds for toothed wheels.
- Dietz, R. E.* (Johnson), 319, Jan. 27, Animal traps.
- Digton, E., & Goldsmith, G.* (Clark), 1331, Apr. 10, Dyes.
- Digney, J. D. & T. S., Lartigue, H., & Forest, H.*
[Johnson), 247, Jan. 21, Railway signals.
- *T. S. & J. D., Lartigue, H., & Forest, H.*
[Johnson), 247, Jan. 21, Railway signals.
- Dilkes, J., & Goldsmith, G.,* 2041, June 9, Sluices and
[weirs.
- *J., & Goldsmith, G.,* 3857, Nov. 26, Gates or
[sluices.
- Dillé, I. P.* (Johnson), 2378, July 9, Reaping-machines.
- Dillet, A. M.,* 3960, Dec. 3, Cheeking fares in vehicles.
- Ditchfield, S. J., Watson, G., & Childs, J.,* 2093, June 13,
[Heating apparatus; gaseous fuel.
- *S. J., Watson, G., & Childs, J.,* 4095, Dec. 12,
[Heating apparatus; gaseous fuel.
- Diver, E.,* 3892, Nov. 28, Obstetric apparatus.
- Dixon, A. A.,* 1400, Apr. 18, Steam-boiler injectors.
- Dixon, C.* (Schlesinger), 464, Feb. 8, Stoning raisins.
- *G. (Fairlie),* 1108, Mar. 26, Railway trucks.
- Dixon, J.,* 222, Jan. 18, Bridges and viaducts.
- *J. A. (Cobley),* 2981, Sep. 11, Treating ores.
- *R., & Palmer, J. T.,* 3866, Nov. 26, Artificial fuel.
- Dobbie, R., & Forbes, P.,* 2959, Sep. 9, Damper for stoves.
- Dobelle, A.,* 1551, Apr. 29, Cleaning, sorting & bruising
[coats, &c.
- Dobson, A., & Horner, G.,* 862, Mar. 10, Steam-boilers.
- *A., & Horner, G.,* 2037, June 7, Steam-boilers.
- *A. J.,* 3192, Oct. 2, Lock-bolts.
- *E., & Wormald, W.,* 2441, July 15, Sewing-ma-
[chines.
- *G., & McKnight, J.,* 3128, Sep. 25, Cropping
[knitted bonnets.
- Dodd, J.,* 3019, Sep. 15, Spinning and doubling.
- Dode, E.* (Brown), 802, Mar. 5, Glass mirrors; grinding,
[polishing, and engraving glass.
- Dodge, G. P.,* 3425, Oct. 22, India-rubber hose.
- *G. P. (McKay),* 865, Mar. 11, Hose-pipes.
- Dodge, J. M.* (Haseltine), 516, Feb. 12, Screw-propellers
[and rudders.
- *T. A. (Morgan-Brown),* 1901, May 27, Hydraulic
[hose.
- Dodgeon, J., & Richmond, T. & W.,* 2252, June 28,
[Damping warp.
- Dolby, T. G. F.,* 449, Feb. 7, Saving life at sea.
- Dold, J. A.* (Wirth), 1332, Apr. 10, Washing yarns.
- *J. A. (Wirth),* 3285, Oct. 10, Washing yarns.
- Dominy, G., & Russell, J.,* 2492, July 19, Winding and
[preserving ribbons, &c.
- Donald, A., & Atkey, A. J.,* 1653, May 7, Shaping and bor-
[ing metals.
- *A., & Atkey, A. J.,* 1693, May 10, Orestampers, &c.
- Donath, F. A. H., & Jasper, C. E. F.,* 407, Feb. 3, Cigars.
- Donisthorpe, A. R., Corah, E., Cooper, J. H., & Clarke,*
[T. A. W., 3113, Sep. 23, Knitting-machines.
- *A. R. & G. E., Clarke, T. A. W., Snowden,*
[W. H., & Dearden, B., 2439, July 15, Mixed yarns.
- *G. E.,* 1456, Apr. 22, Passenger register.
- *G. E.,* 1858, May 22, Corkscrews.
- *G. E. & A. R., Clarke, T. A. W., Snowden,*
[W. H., & Dearden, B., 2439, July 15, Mixed yarns.
- *R. F., & Clarke, T. A. W.,* 108, Jan. 10,
[Crimped hair.
- *R. F. & Clarke, T. A. W.,* 3869, Nov. 26,
[Padding cushions, &c.
- Donnet, B.,* 2563, July 28, Looms.
- Donovan, R. E.,* 1516, Apr. 26, Stoving or heating tobacco.
- Doty, H. H.,* 1047, Mar. 20, Lamp-burners.
- *H. H.,* 1498, Apr. 25, Railway carriage oil lamps.
- Douds, D., & Hartsuff, J. H.,* 2649, Aug. 7, Steam-pumps.
- Dougall, J.,* 2369, July 9, Collecting fares or payments.
- Dougherty, W.* (Haseltine), 932, Mar. 14, Casting steel.
- Douglas, J.,* 3624, Nov. 7, Disintegrating peas, &c.
- Douglass, B.* (Clark), 4247, Dec. 26, Generating steam.

Douillard, G. M. A. S. (Newton), 3970, Dec. 3, Night signals.
Doury, P. (Newton), 89, Jan. 8, Water-wheels; mount-
 [ing same].
Doussat, P. (Browne), 1892, May 26, Cartridges.
Dowd, M. & P. (Mewburn), 3363, Oct. 17, Furnaces.
 — *P. & M.* (Mewburn), 3363, Oct. 17, Furnaces.
Dowdall, J. B., 2566, July 28, Signalling to driver of cabs, &c.
Dowler, T. W., & Smith, J., 3580, Nov. 4, Studs and solitaires.
Downing, S., 1667, May 8, Bricks.
Dowson, A. & J. E., 1116, Mar. 26, Tramways.
 — *J. E. & A.*, 1116, Mar. 26, Tramways.
Drague, A. (Clark), 3167, Sep. 29, Reproducing patterns
 [of mouldings, reliefs, &c].
Drake, J. A. (Lake), 1714, May 10, Baling cotton.
Dresse, Laloux & Co. (Henkel), 1080, Mar. 24, Fire-arms.
Drew, J., 929, Mar. 14, Compendium or receptacle.
 — *T., & Bevan, E.*, 931, Mar. 14, Paper-pulp & fibres.
Dreyfus, I. (Browne), 4072, Dec. 10, Lubricators.
Driver, V., & Wallace, J., 2909, Sep. 4, Cleaning, &c.
 [table-cutlery].
Drummond, D., & Stroudley, W., 6, Jan. 1, Casting metals.
Du Bois, C. (Haseltine), 1250, Apr. 4, Elevating.
Dubois, G., & François, J. (Ball), 3611, Nov. 6, Boring
 [rock, &c].
Duborget J. & Durand J. M. V. (Browne), 4080, Dec. 11,
 [Boots and shoes].
Dubreuil, A. J. V. (Henderson), 2783, Aug. 22, Watches
 [and clocks].
 — *V.* (Mewburn), 410, Feb. 4, Lubricating.
Dubsky, E. (Zingler), 694, Feb. 24, Carriage lamps.
 — *E.* (Zingler), 2789, Aug. 23, Carriage lamps.
Duchamp, P. (Clark), 2835, Aug. 23, Umbrella and
 [parasol frames].
Du Chastaingt, N., & Marville, L. J. C. (Tongue), 2668,
 [Aug. 9, Seats, &c. for advertising].
Duckham, F. E., 1322, Apr. 10, Railway breaks.
 — *F. E., & Birt, G. R.*, 1297, Apr. 8, Elevators.
 — *H.*, 1959, May 30, Weighing.
 — *H.*, 4197, Dec. 20, Testing springs, &c.
Duckworth, J., & Heywood, G., 2803, July 3, Keirs.
Ducomet, J. (Bonamy), 2377, July 9, Nets.
Duffee, E., 1575, May 1, Gas.
Dujardin, P. J., & Gillon, J. F. A., 1025, Mar. 19, Rolling-mills.
Duke, H., & Prouse, R. S., 366, Jan. 30, Axles and axle-boxes.
Du Motay, C. M. Tessié (Smith), 328, Jan. 28, Baryta.
Duncan, G., & Wilson, W. A., 383, Jan. 31, Printing.
Dunderdale, W. J., & Holt, T. M., 531, Feb. 13, Tables.
Dunk, S. C., 3436, Oct. 22, Preserving telegraph posts.
Dunkerley, B., & Minshall, W., 603, Feb. 18, Felting hat
 [bodices, &c].
Dunlop, A., Stevenson, W., & Ree, W., 3248, Oct. 7,
 [Cutting minerals].
 — *J. M., & Hooper, W.*, 3997, Dec. 4, Telegraph cables.
Dunn, J., 962, Mar. 15, Fuel economisers.
 — *P., & Spence, J. B.*, 3356, Oct. 16, Manure.
 — *R.*, 1350, Apr. 14, Lowering ships' boats.
 — *S.*, 2278, July 1, Destroying vegetable life, &c.
 — *T. W., & Prangley, O.*, 420, Feb. 5, Cleansing wool.
 — *T. W., & Prangley, O.*, 2627, Aug. 5, Cleansing wool.
Dunnett, F. H., 880, Mar. 11, Stamping and embossing
 [presses].
Du Pont, E. & L. (Haseltine), 3273, Oct. 9, Gunpowder.
Dupont, L., 4060, Dec. 9, Gas-burners.
Du Pont, L. & E. (Haseltine), 3273, Oct. 9, Gunpowder.
Du-Pont, L. Bopp., 2076, June 11, Cooking.
Dupuch, G. J. (Henry), 33, Jan. 2, Water-gauges.
Durand, J. M. V., & Duborget, J. (Browne), 4080,
 [Dec. 11, Boots and shoes].
Durant, J., 2825, Aug. 27, Administering medicines to
 [animals].
Durham, F., & Hupton, H. E., 1951, May 30, Indicating
 [or checking apparatus].

Durnford, H. F., 678, Feb. 28, Horse-shoes.
Durruthy, L. O., & Lissagaray, H. P., 809, Mar. 6, Blood
 [manure].
Dutton, S. T., 1712, May 10, Railway points and signals.
 — *S. T., Clunes, T., & Holland, W.*, 2034, June 7,
 [Railway points and signals].
Duty, G., 4128, Dec. 16, Watercloset cisterns.
Dwyer, E., 2304, July 8, Self-acting couplings.
Dyer, G., 3400, Oct. 20, Fire-stoves.
 — *W. H., & Simonds, W. E. (Sar)*, 3120, Sep. 24,
 [Railway carriage wheels].

E.

Eads, J. B. (Newton), 2978, Sep. 10, Bridges.
 — *J. B.* (Newton), 3002, Sep. 12, Bridges.
 — *J. B.* (Newton), 3591, Nov. 4, Bridges and roofs.
Eamson, J. J., 2526, July 24, Sash and other weights.
Early, J., 432, Feb. 5, Enumerating passengers in cars.
Eason, G. L. (Frank), 2020, June 6, Watch-case springs
 [and fasteners].
Eassie, P. B., 3510, Oct. 29, Pile-drivers.
Easton, E., Pole, W., & Whichcord, J., 2149, June 19,
 [Safe and strong room doors].
Eastwood, A. J., & Ainsworth, R., 2502, July 21, Clean-
 [ing cloths and hides].
 — *T. C., & Little, G.*, 839, Mar. 8, Combing-ma-
 [chinery].
Eaton, R., & Hall, J. H. (Lake), 26, Jan. 2, Manufac-
 [turing meal, &c].
Eayrs, W. P., & Stuart, T. E. (Haseltine), 2354, July 8,
 [Rotary-engines].
Eccles, J. & S. (Wise), 2661, Aug. 8, Journals and shaft
 [bearings].
 — *S. & J.* (Wise), 2661, Aug. 8, Journals and shaft
 [bearings].
Ecroyd, A. R., & Wase, J., 1318, Apr. 9, Furnaces.
Edgcome, T. L. B. (Henderson), 1645, May 7, Fettingling
 [for furnaces].
Edge, J. S., & Deeley, J., 1422, Apr. 19, Fire-arms.
Edgerton, J., Hordley, E., & Newton, J., 3772, Nov. 20,
 [Communicating apparatus].
Edington, J. C., 909, Mar. 13, Preventing vessels from
 [sinking; raising sunken vessels].
Edison, T. A., 735, Feb. 27, Chemical telegraphs.
 — *T. A.*, 1508, Apr. 25, Electric telegraphs.
 — *T. A.*, 2988, Sep. 11, Telegraphs.
Edkins, C., Grenves, T., & Newman, J., 3685, Nov. 12,
 [Sleeve-links, solitaires, &c].
Edmonds, J. R., & Pullman, J., 1242, Apr. 3, Staking
 [and grounding leather].
Edmunds, H., Wood, J. A., & Wright, D. P., 1355,
 [Apr. 15, Lighting and heating].
Edwards, D., 4133, Dec. 16, Tin andterne plates.
 — *D. O.*, 2974, Sep. 10, Producing and radiating
 [heat].
 — *E.*, 541, Feb. 13, Rock-boring and other engines.
 — *E.*, 1280, Apr. 7, Rock-boring engines.
 — *E.*, 2888, Sep. 2, Optical illusions.
 — *E. (Miller)*, 2689, Aug. 13, Railroad cars.
 — *G.*, 3905, Nov. 29, Stoves.
 — *G. W. B.*, 243, Jan. 21, Manure drills.
 — *J.*, 3029, Sep. 16, Locks and striking plates.
 — *J.*, 4114, Dec. 13, Bottles and stoppers.
 — *J. C., & Taft, J.*, 373, Jan. 30, Cleaning, &c.
 [fibres].
 — *R. W.*, 837, Mar. 8, Relief stamping or printing.
 — *S.*, 1134, Mar. 27, Lawn-mowers.
 — *W. H.*, 2763, Aug. 21, Mounting photographs.
Egerton, H. A., 3936, Dec. 1, Ships and ferry boats.

Egginton, J. W. (Stone), 4240, Dec. 24, Lamps.
 Eichbaum, F. H., Berry, J. H., & Randolph, M. (Hunter),
 [2177, June 21, Gas.
 Eichwede, E. (Wirth), 2660, Aug. 8, Heating railway
 [carriages.
 Eickemeyer, R. (Wilson), 76, Jan. 7, Hats.
 — R. (Wilson), 487, Feb. 10, Hats.
 — R. (Bousfield), 1794, May 16, Engines, meters,
 [and pumps.
 Elce, J., & Arundel, H. B., 1950, May 29, Spinning.
 — J., & Wilkinson, F., 2301, July 2, Spinning.
 Eley, M., & Henderson, J. C. A., 3851, Nov. 26, Neck-
 [ties.
 — W. T., 369, Jan. 30, Cartridge cases.
 Elkan, D., 3410, Oct. 21, Umbrella tip caps.
 Ellington, E. B., 622, Feb. 19, Hydraulic hoists.
 Elliot, C. (Stamp), 788, Mar. 5, Laminating and crushing
 [bark.
 — J. C., 3612, Nov. 6, Roughening horse-shoes.
 Ellis, A. W., 1274, Apr. 7, Treating substances containing
 [ammonia and cyanogen, &c.
 — A. W., 1285, Apr. 8, Utilising waste products of
 [ammonical liquor.
 Ellis, J., 3311, Oct. 11, Constructing dwelling-houses.
 Ellis, S. K. (Haseltine), 4261, Dec. 29, Clasps for stock-
 [ing supporters.
 Ellison, J., 2429, July 14, Breaking stone, ore, &c.
 Elmsley, R., 251, Jan. 22, Railway signals.
 Elmslie, E. W., 211, Jan. 18, Opening cases, boxes, &c.
 Elsley, T., 3241, Oct. 6, Opening and closing casements.
 Elwell, J., 3831, Nov. 24, Cattle cribs, poultry pens, &c.
 Emary, J. L., & Cooke, E. J. W., 2445, July 16, Optical
 [instruments.
 Emmens, S. H., 526, Feb. 12, Railways.
 — S. H., 576, Feb. 15, Producing heat and light.
 — S. H., & Rippin, E. C., 2108, June 14, Railway
 [signals and points.
 Emsley, S., 4093, Dec. 12, Spinning and twisting.
 — S., & Peel, J., 3295, Oct. 10, Pickers used in
 [weaving.
 — S., & Ryo, J. A. & H., 3066, Sep. 18, Twisting
 [fibres in spinning.
 Emslie, J. A., & J. T., 2309, July 3, Tell-tales.
 — J. T., & J. A., 2309, July 3, Tell-tales.
 England, J. & W., 812, Mar. 6, Fuel-economisers.
 — W. & J., 812, Mar. 6, Fuel-economisers.
 Engledue, W. J., 745, Feb. 28, Drying peat, china clay, &c.
 Entwistle, E., 2283, July 2, Railway signals.
 Epineuil, E. L. H. J. Count D', 829, Mar. 7, Stoves.
 Erichsen, E. J. (Jensen), 1055, Mar. 21, Manures.
 — E. J. (Jensen), 1499, Apr. 25, Roofing.
 — E. J. (Page), 2161, June 20, Valise or knapsack.
 — E. J., & Maardt, J. G. (Jensen), 1073, Mar. 22,
 [Coke ovens, &c.
 — J., & Maardt, J. G. (Jensen), 602, Feb. 18,
 [Coke ovens, &c.
 Ermen, A. & G., 3184, Oct. 1, Polishing thread, &c.
 — G., 533, Feb. 13, Fuel-saving fire-grate.
 — G. & A., 3184, Oct. 1, Polishing thread, &c.
 — G. A. & H. E., 3386, Oct. 18, Preparing fibres.
 — H. E. & G. A., 3386, Oct. 18, Preparing fibres.
 Erskine, F., & Denby, W. S., 192, Jan. 17, Stench-traps.
 — F., & Denby, W. S., 312, Jan. 27, Steam-boilers.
 Eskrett, C., & Searle, H., 1391, Apr. 17, Envelopes used
 [in extracting oil, &c.
 — C., & Searle, H., 1792, May 16, Envelopes used
 [in extracting oil, &c.
 Esplen, W., 4189, Dec. 20, Utilizing steam from deck
 [engines.
 Estlin, J. P., 2256, June 28, Boat-plugs.
 Etzensberger, R. U., 2448, July 16, Infusions or extracts.
 Eustace, M., 943, Mar. 14, Cultivating green crops.

Eustace, M., & Kennan, J. & T., 2230, June 27, Culti-
 [vating green crops.
 Evans, E., 2142, June 18, Heating water, &c.
 — M., 1970, May 31, Signalling in trains, operating
 [breaks; fastening railway carriage doors.
 — W. N., & Rawle, G., 14, Jan. 1, Leather.
 — W. R., 2261, June 30, Fire-arms.
 Everett, G. A., 3173, Sep. 30, Pressure-gauges.
 — G. A., 4275, Dec. 30, Railway couplings.
 Everickx, C. J., 3001, Sep. 12, Portable chairs.
 Evershed J., 2204, June 24, Tanning hides.
 Eyraud, M., 1927, May 28, Washing and sorting coal, &c.
 Eyland, C. N., 1171, Mar. 29, Buckles, &c.
 — C. N., 3085, Sep. 19, Buckles and clasps.
 — E. S., & Warren, J. B., 3245, Oct. 7, Turning
 [over leaves of music.
 Eymael, A. (Johnson), 3360, Oct. 17, Boilers.

F.

Fahlman, F. J., 2425, July 14, Waterclosets and commodes.
 Fairbairn, Sir W., & Beeley, T., 270, Jan. 23, Steam-boilers.
 Fairbank, J. (Vanstone & Hollings), 3440, Oct. 23, Nuts
 [and tubes.
 Fairbanks, H. (Hughes), 2045, June 9, Locomotives.
 Fairburn, R., 260, Jan. 23, Washing fibres.
 Fairchild, H. J. (Stiles), 1060, Mar. 21, Pressure-gauges.
 Fairclough, H. & J., 350, Jan. 29, Separating flour from
 [middlings, &c.
 — J. & H., 350, Jan. 29, Separating flour from
 [middlings, &c.
 Fairfax, H., & Darlow, W., 3736, Nov. 18, Magneto-
 [electric apparatus for curative purposes.
 Fairlie, R. F. (Dixon), 1108, Mar. 26, Railway trucks.
 Fairman, J. (Haddan), 1157, Mar. 28, Fasteners.
 — J., & De Witt, G. (Coddington), 1004, Mar. 19,
 [Blocks, slabs, pillars, tubes, &c.
 Falconnier, G. (Autier), 4202, Dec. 22, Pressure cocks.
 Fanchamps-Nicolaï, P. (Mills), 4270, Dec. 30, Raising
 [trap fabrics.
 Farcot & Sons, & Bède & Co. (Murdoch), 1862, May 22,
 [Steam-engines.
 Fardon, T., 2927, Sep. 5, Expansion gear for engines.
 Farey, B. W., 644, Feb. 20, Valve-gear of engines.
 Farinaux, I., Fichaux, A., Girol, O., & Sartoris, H.
 (Boyd), 2951, Sep. 8, Furnaces and fire-places.
 — J. (Casper), 1405, Apr. 18, Packing.
 — J. (Casper), 2602, Aug. 1, Feeding boilers.
 — J., & Dezuarte, E. (Casper), 1636, May 6,
 [Washing.
 Farmer, C., & Turner, J. S., 2826, Aug. 27, Linch-pins.
 Farmer, G. P. (Johnson), 1107, Mar. 25, Threading needles.
 Farmer, J., & Ronald, B., 1676, May 9, Waterclosets and
 [cisterns.
 — J., & Hamilton, J. B., 1008, Mar. 19, Musical
 [instruments.
 Farnham, C. H., & Densmore, E., 668, Feb. 22, Type-
 [writing machines.
 Farquhar, J. F. C., & Silber, A. M., 3291, Oct. 10, Lamps
 [and lanterns.
 Farron, S., 2569, July 29, Cocks or taps.
 Farrow, C., 218, Jan. 18, Bottle-stoppers.
 — C., 2066, June 11, Iron wine bins.
 Faucheux D'Humy, P. R. de, 2457, July 16, Inkstands.
 — P. R. de, 2465, July 17, Tea and
 [coffee caddies.
 — P. R. de, 2536, July 25, Calendars.
 — P. R. de, 2640, Aug. 6, Bottle-stoppers.
 — R. R. de, 4000, Dec. 5, Fastening
 [for bottle-stoppers, &c.

- Faulkner, F., & Lees, S. S., 1612, May 5, Agitating apparatus for breweries, &c.
 — J. H., & Tatters, W., 1392, Apr. 17, Meter [taps and valves].
 Faure, C. A., 3540, Oct. 30, Thermo-electric batteries.
 — C. A., & Mackie, S. J., 1830, May 20, Explosive compounds.
 — C. A., & Mackie, S. J., 3832, Nov. 24, Explosive compounds.
 Fawcett, J., 705, Feb. 25, Peat.
 — T., & Coulter, J., 159, Jan. 15, Governors.
 — T. C., 471, Feb. 8, Brick-making.
 — T. C., 4045, Dec. 8, Brick-making.
 — W., 763, Mar. 3, Fuel-economisers.
 Fay, W. C. (Shedd), 1101, Mar. 25, Treating fibres.
 Fayet, F., & Garrigue, F. (Gedge), 1800, Apr. 8, Parasols and umbrellas.
 Fayol, A., 852, Mar. 10, Umbrellas, parasols, &c.
 Fayol, H. (Imray), 1852, May 22, Supporting respiration [and light in suffocating atmospheres, &c].
 Fear, H., & Wilson, P., 3689, Nov. 13, Safes.
 Fearn, T., 1277, Apr. 7, Electro-deposition of tin.
 Feather, S., 265, Jan. 23, Fire-grates.
 Featherstonhangh, J. F. W., 3289, Oct. 10, Treating fatty matters.
 Fell, G. N. & J. B., 1014, Mar. 19, Light railways.
 — J. B. & G. N., 1014, Mar. 19, Light railways.
 Fellows, N., 4129, Dec. 16, Feeding-bottles.
 Fenby, H. P., 1431, Apr. 21, Obtaining motions, &c.
 — H. P., 3590, Nov. 4, Figured iron and steel.
 Fenn, A. G., Whiteman, W. T., & Umbers, E., 56, Jan. 4, [Railway signals].
 Fennelly, R. (Pilkington), 8115, Sep. 23, Suspended railways.
 — R. (Pilkington), 8116, Sep. 23, Wheels, axles, &c.
 — R., & Fuckle, H. J., 245, Jan. 21, Aerial tramways.
 Fenton, J., 4148, Dec. 17, Gunpowder.
 — M., & Cockayne, B., 3354, Oct. 16, Casting metals.
 Feret, L., & Schacher, C., 2809, Aug. 26, Furnaces.
 Ferguson, D., & Koehler, J. W., 3388, Oct. 18, Cleansing sharps and middlings.
 Ferry, L. D. Jeandron- (Johnson), 1293, Apr. 8, Boots [and shoes].
 Fichaux, A., Girol, O., Sartoris, H., & Farinaux, I. (Boyd), 2951, Sep. 8, Furnaces and fire-places.
 Ficht, J., & David, P. I. (Johnson), 1222, Apr. 2, Ozone.
 Field, C. M. (Curtis), 2389, July 10, Cutting precious stones.
 Field, E., 2254, June 28, Preventing and removing incrustation.
 — F., & Smith, A., 3942, Dec. 2, Decolorizing hydrocarbons.
 Fielden, R. & T., 1128, Mar. 26, Pickers for looms.
 — T. & R., 1128, Mar. 26, Pickers for looms.
 Fielding, J., 3067, Sep. 18, Railway breaks.
 Finch, A. L., T. F. & J., 3480, Oct. 27, Economising fuel.
 — J., A. L. & T. F., 3480, Oct. 27, Economising fuel.
 — T. F., J. & A. L., 3480, Oct. 27, Economising fuel.
 Findlay, D. B., 619, Feb. 19, Raising submerged bodies.
 Finlay, H., 3281, Oct. 10, Ascertaining and correcting deviation of ships' compasses.
 Finnegan, G., 1727, May 12, Converting motions.
 Firth, Sir C. H., 1704, May 10, Finishing silks, plush, &c.
 — J., & Senior, G. A., 4182, Dec. 19, Fluid-valves.
 — M., Bradley, C., Smith, B., Stake, J., & Tolson, R., 951, Mar. 15, Combing fibres.
 — W., 3141, June 18, India-rubber springs.
 Fischer, A. (Jobbins), 2018, June 6, Washing glasses, [dishes, &c].
 Fischer, J., 3175, Sep. 30, Water-meters.
 Fish, D. W., 905, Mar. 12, Hand-stamps.
 — W. S., 884, Mar. 12, Asbestos packing.
 — W. S., 924, Mar. 18, Non-conducting coverings.
 Fisher, R. A., 2435, July 15, Preserving iron and steel.
 Fiak, F. (Bauer & Krieb), 1584, May 2, Printing telegraphs.
 Fiaken, D., 497, Feb. 11, Steam-plough porters.
 — W., 3262, Oct. 8, Steam-cultivators.
 — W., 3900, Nov. 28, Stoves or fireplaces.
 Fison, F. W., & Harcourt, A. G. V., 2685, Aug. 18, Purifying gas and extracting products.
 Fitz-Gerald, D. G., & Molloy, B. C., 2102, June 13, Chromic acid.
 — D. G., & Molloy, B. C., 2103, June 13, Voltaic batteries.
 — Sir G. D., 1619, May 5, Steam-boilers.
 Fitz-Patrick, J. J. (Lake), 4040, Dec. 8, Drawers or pants.
 Fitz-Randolph, T. (Clark), 3544, Oct. 31, Excavating.
 Fixter, J. G., & Smart, J., 1820, May 20, Stocks and dies.
 Flatley, A., & Marson, J. (Lake), 1988, June 3, Collars [and clasps].
 Fleetwood, T. M. (Newton), 2388, July 10, Sail and drag [for boats].
 Fleming, F., & Milner, J., 1035, Mar. 20, Wire cards and reed wires.
 Fletcher, A. E., 1786, May 16, Carbonates of soda & potash.
 — J., 3789, Nov. 20, Spring mattresses.
 Fletcher, J. W., Whidden, J. D., & Reed, E. F. (Lake), 2779, Aug. 21, Production of light.
 Fletcher, R. J., Gibson, E., Taylor, W. J., & Bardsley, J. P., 866, Mar. 11, Felt hats, &c.
 — T., 3733, Nov. 17, Gas heating apparatus.
 — W., 457, Feb. 7, Motive-power.
 Fleury, A., 3809, Oct. 11, Determining course of bodies [in air and water].
 — F. G., 762, Mar. 1, Water-meters.
 — F. G., 2523, July 23, Ice-making.
 Flinsch, F. (Prince), 446, Feb. 7, Packing tobacco, &c.
 — F. (Prince), 461, Feb. 8, Distributing color.
 Flitcroft, T., 2934, Sep. 6, Carding-engines.
 Florence Manufacturing Co. (Scott), 2831, Aug. 28, Brushes.
 Flos, A., & Maass, F., 3389, Oct. 18, Lubricative packing.
 Flower, Honble. R., 1201, Apr. 1, Fuel.
 Floyd, J. N., 3529, Oct. 30, Gripping ropes and chains.
 Flursheim, M., & Korwan, F. (Wirth), 1611, May 5, Self-lighting gas apparatus.
 — M., & Korwan, F. (Soul), 3607, Nov. 6, Self-lighting gas apparatus.
 Fogarty, T. B. (Lake), 3848, Nov. 25, Gas-engines.
 Fogg, J., Oldham, J., Bird, J., & Worth, J., 2886, Sep. 2, Stiffening felt hats.
 Folk, J. E., Wilson, C. F., & Miller, S. H. (Newton), 19, Jan. 1, Dies.
 Folhard, A. (Baxter), 1687, May 9, Engaging and disengaging ships' boats.
 — A. C. (Baxter), 2124, June 16, Raising and lowering ships' boats.
 Folliot, F., & Haas, F., 4170, Dec. 19, Heating & lighting.
 Follows, F. W., & Bate, J., 2528, July 24, Cutting, &c. gorse.
 — F. W., & Bate, J., 2836, Aug. 28, Lawn-mowers, &c.
 Fontaine, H. (Johnson), 1180, Mar. 31, Magnets.
 — J. A. A. (Bonneville), 4260, Dec. 29, Preserving life at sea.
 Foot, W., & Gregory, H. S., 1371, Apr. 16, Hoops for railway trucks, &c.
 Footner, H., 1774, May 15, Railway sidings.
 Forbes, G. H., 835, Mar. 8, Fuel and lime.
 — G. H., 1191, Mar. 31, Fuel.
 — G. H., 1204, Apr. 1, Cement, plaster, fuel, &c.
 — G. H., 1407, Apr. 18, Cements, artificial stone, &c.
 — G. H., 1764, May 14, Gypsum cement or plaster.
 — G. H., 1816, May 19, Lime, plaster, and fuel.
 — G. H., 1832, May 20, Cements, artificial stone, &c.
 — G. H., 1999, June 4, Cements.
 — G. H., 3110, Sep. 23, Fuel.
 — G. H., 3205, Oct. 3, Fuel, lime, cement, plaster, &c.

Forbes, G. H., 3530, Oct. 30, Fuel and lime.
 — G. H., 3783, Nov. 20, Cements, artificial stone, &c.
 — G. H., 4160, Dec. 18, Gas and quick lime.
 — J., & Hamilton, J., 3162, Sep. 29, Rotary engines
 [and pumps.
 — P., & Dobbie, R., 2959, Sep. 9, Damper for stoves.
 Ford, A., 3865, Nov. 26, Asphaltes.
 — W. F., 3135, Sep. 25, Boots and shoes.
 Forder, F., 3563, Nov. 1, Cabs and other vehicles
 Forest, H., Digney, J. D. & T. S., & Lartigue, H.
 [(Johnson), 247, Jan. 21, Railway signals.
 Forester, T., Banks, E., Robey, C., & De Bettignies
 [Bros., 970, Mar. 15, Kilns.
 Forges & Foundries Co. (Browne), 1574, May 1, Metallic
 [alloys.
 — (Browne), 2335, July 5, Metallic
 [alloys.
 — (Browne), 3376, Oct. 18, Heating
 [blast.
 Forman, R., 3493, Oct. 28, Cleansing powder.
 Forrest, H. E., 610, Feb. 18, Tools for finishing axle blanks.
 — J. A., & Hayes, W. W., 2907, Sep. 4, Waterclosets.
 — T. H., 1059, Mar. 21, Steam-pumps.
 Forster, J. R., 2734, Aug. 18, Spigot and socket pipe
 [joints.
 Forster, R. A. (Wuth), 4286, Dec. 31, Utilizing waste
 [from print and dye works.
 Forsyth, A., Griffiths, J. R., & Long, J., 776, Mar. 4,
 [Photographic portraits.
 Forward, D. (Haseltine), 3060, Sep. 18, Tanning.
 Foster, B. H., 252, Jan. 22, Steam and other engines.
 — D., & Lockwood, W., 1606, May 3, Casting steel
 [ingots.
 — E., & Rickard, S., 616, Feb. 19, Domestic fire-
 [places.
 — F., & Codd, H., 4268, Dec. 29, Bottles & stoppers.
 — James & J. H., 1375, Apr. 16, Kitchen-ranges.
 — John, 3316, Oct. 13, Railway signals.
 — John H. & J., 1375, Apr. 16, Kitchen-ranges.
 — W., 384, Jan. 31, Preparing fibres for spinning.
 Fottrell, J., 3086, Sep. 20, Pipes and tubes.
 Foulis, W., 59, Jan. 6, Charging and drawing retorts.
 — W., & Wotherspoon, J., 2391, July 11, Retort lids.
 Foundries & Forges Co. (Browne), 1574, May 1, Metallic
 [alloys.
 — (Browne), 2335, July 5, Metallic
 [alloys.
 — (Browne), 3376, Oct. 18, Heating
 [blast.
 Fountain, C., & Smith, H. E., 3809, Nov. 22, Printing.
 Fowke, C., 624, Feb. 19, Sewing-machines.
 Fowler, G., 2137, June 18, Charging and discharging
 [tubs or corves.
 Fowler, H., & Waller, I. (Haseltine), 77, Jan. 8, Hos-
 [pital beds.
 Fowler, J., & Mackay, G., 1388, Apr. 17, Carriages and
 [wagons.
 Fox, C. H. & T., 2703, Aug. 15, Dyeing piece goods.
 — H. B., 390, Feb. 1, Waterproof garments.
 — H. B., 1759, May 14, Joint for railway rails.
 — H. B., 1932, May 29, Lock for books, &c.
 — S., Tannett, J. T., & Craven, S., 1847, May 21,
 [Turning, planing and boring.
 — T. & C. H., 2703, Aug. 15, Dyeing piece goods.
 Foxwell, D., 3545, Oct. 31, Forming teeth in metal cards.
 Frager, A., & Michel, C., 3119, Sep. 23, Water-meters.
 Francis, D., 1028, Mar. 19, Convertible desk, seat, & table.
 — J. R. (La Rue), 930, Mar. 14, Separating mag-
 [netic from non-magnetic substances.
 — J. R. (La Rue), 1865, May 23, Treating copper
 [pyrites, &c.
 — W. P., & Addiscott, F., 3031, Sep. 16, Coffeetina.

Franck, J., & Maignan, L., 1561, Apr. 30, Stoppering
 [bottles, &c.
 François, J., & Dubois, G. (Ball), 3611, Nov. 6, Boring
 [rock, &c.
 Frank, P. (Eason), 2020, June 6, Watch-case springs
 [and fasteners.
 Frankland, W., & Rhodes, J. & E., 1436, Apr. 21, Con-
 [suming smoke and economising fuel.
 Franz, M. A. (Gardner), 3264, Oct. 8, Air-gas.
 Fraser, A. C., & Watson, W., 3632, Nov. 7, Treating
 [sewage.
 — H., & Sumners, H., 1408, Apr. 18, Signalling
 [apparatus.
 Freeman, H. O. (Bousfield), 980, Mar. 17, Cheese.
 Freestone, J. W., & Humphries, J., 2729, Aug. 18,
 [Treating oxide of iron for sulphur, &c.
 Fremlin, R. J., 640, Feb. 20, Purifying, &c. casks.
 — R. J., 1010, Mar. 19, Purifying, &c. casks.
 Freret, L. (Godard), 2079, June 12, Producing & repro-
 [ducing designs, &c. on porcelain.
 — L. (Guerot & Lesourd), 2956, Sep. 9, Electric-
 [battery.
 Freudentheil, W. (Clark), 1639, May 6, Pianofortes.
 Fréville, E. (Gedge), 2396, July 11, Using heated gases
 [and steam.
 Frezon, J. B. (Johnson), 4027, Dec. 6, Treating fabrics.
 Friedlaender, J., 2295, July 2, Spongography.
 — J. (Moeller), 2340, July 7, Printing-press.
 Frier, J., & Cameron, J. A. (Strange), 381, Jan. 31,
 [Cotton-presses.
 — J., & Cameron, J. A., & Strange, L., 904, Mar. 12,
 [Cotton-presses.
 Friston, S. C., & Kilner, J., 1093, Mar. 25, Handles and
 [scales of knives, &c.
 Frost, J., & Nicklin, T., 1396, Apr. 17, Kilns.
 Fry, A., 3681, Nov. 12, Railway couplings.
 Fuchy, T., 3044, Sep. 16, Ornamenting gold articles.
 Fuller, B. F. (Ashley), 3973, Dec. 3, Printing-presses.
 — B. F. (Ashley), 3974, Dec. 3, Paper feeder for
 [printing-presses.
 — T., 161, Jan. 15, Billiard cues.
 — T., 1836, May 21, Venetian blinds.
 Fullicks, A. T., 477, Feb. 10, Pavements, platforms,
 [stairs, &c.
 Furness, E., & Varley, F. H., 2324, July 4, Imparting,
 [or arresting motion of rotary shafting, &c.
 Fyfe, D. A., & Bowers, W. H., 2873, Sep. 1, Recover-
 [ing alkali.

G.

Gabriel, J. S., 638, Feb. 20, Sawing stone.
 — J. S., 2024, June 6, Smoothing stone.
 Gadd, W., 1763, May 14, Combustion of oils.
 Gaiffe, E. (Clark), 3449, Oct. 23, Color-printing.
 Gaillon, P. A., 2412, July 12, Casks.
 — P. A., 2414, July 12, Building.
 Galasse-Ketin (Newton), 3308, Oct. 11, Connecting pipes.
 Galeer, E., 854, Mar. 10, Hair wash.
 Gall, C., 392, Feb. 1, Furnaces.
 Galland, N. B. (Johnson), 4123, Dec. 15, Holding and
 [guiding penholders, &c.
 Galland, N. D. G., 2617, Aug. 2, Railways and rolling
 [stock.
 Galland, N. J. (Barlow), 827, Mar. 7, Sulphuric acid.
 — N. J. (Barlow), 1129, Mar. 26, Pneumatic
 [pumps.
 — N. J. (Barlow), 1130, Mar. 26, Cleansing casks.
 — N. J. (Barlow), 1346, Apr. 14, Refrigerators.

- Galland, N. J. (Barlow), 1443, Apr. 21, Cooling fluids, &c.
 Gallet, V. H. E. (Johnson), 2487, July 19, Steel.
 Galiand, L. H. M., & Breittmayer, E. (Johnson), 3375,
 [Oct. 16, Telegraphic code.
 Galloway, C. J., & Beckwith, J. H., 1620, May 5, Slide-
 [valves.
 — C. J., & Beckwith, J. H., 4036, Dec. 8, Steam-
 [boilers.
 — G. B., 3369, Oct. 17, Economising fuel.
 — G. B., 3599, Nov. 5, Roadways and paths.
 Gally, M. (Coddington), 1395, Apr. 17, Telegraphic
 [apparatus.
 Gamboni, P., 2469, July 17, Motive-power.
 Garan, Ticozzi & Co. (Lake), 441, Feb. 6, Railway breaks.
 Gardam, J. B., & Booth, J., 1603, May 3, Imitation seal
 [skins, &c.
 Gardiner, H. (Lake), 757, Mar. 1, Railway carriage
 [springs.
 — H. (Lake), 2851, Aug. 29, Railway carriage
 [springs.
 Gardiner, P. G., 37, Jan. 3, Railroad car-springs.
 Gardner, D., 633, Feb. 20, Inlaid flooring; ornamenting
 [surfaces.
 — E. T., 1881, May 24, Safety magazine lamps.
 — H., 963, Mar. 15, Producing light and heat.
 — H., 985, Mar. 17, Heating boilers, &c.
 — H., 3824, Nov. 22, Horse-shoes.
 — H. (Gigodot), 3053, Sep. 17, Ventilating
 [furnaces.
 — H. (Franz), 3264, Oct. 8, Air-gas.
 — J., & Orme, T., 4086, Dec. 11, Grinding colors.
 Gardner, R. W. (Clark), 606, Feb. 18, Governors.
 Gardner, T., 4243, Dec. 26, Miners' safety-lamps.
 — W., & Jennings, H., 2586, July 30, Door-knobs
 [and spindles.
 Garey, J. H., & Turner, A. W., 2493, July 19, Steam-
 [boilers.
 Garforth, W. E., & Walker, W., 2249, June 28, Steam-
 [pumps.
 Garland, R. W., & Steel, H. J., 1192, Mar. 31, Domestic
 [stoves.
 Garnier, F. A. (Gedge), 8181, Oct. 1, Braces.
 Garon, F., 62, Jan. 6, Stoves.
 Garrard, J. G., 2090, June 13, Pegs or holdfasts.
 Garrett, G., 3054, June 10, Finishing metal tubes.
 Garrigues, F., & Fayet, F. (Gedge), 1300, Apr. 8, Para-
 [sols and umbrellas.
 Garth, R. F., & Bentley, G. W., 145, Jan. 14, Treating
 [hides, cotton-waste, &c.
 Gascoyne, W., 498, Feb. 11, D-traps for water-closets, &c.
 Gaskell, F. Penn. (Harris), 3055, Sep. 17, Weighing scales.
 Gates, J. (Haseltine), 4051, Dec. 9, Looms.
 — J. & S. F. (Morgan-Brown), 1634, May 6, A fle-
 [boxes.
 — S. F. & J. (Morgan-Brown), 1634, May 6, A fle-
 [boxes.
 Gaume, C. (Palmer), 2618, Aug. 2, Electro-magnetic
 [engines.
 Gauthey, M. M. E. (Johnson), 3630, Nov. 7, Cartridges.
 Gaveau, J. C., 4255, Dec. 27, Aeronautical apparatus.
 Gawler, J. C., 2737, Aug. 18, Coupling railway carriages.
 Gawthorp, W., & Ambler, W., 3392, Oct. 20, Taps and
 [valves.
 Gay, P., 95, Jan. 9, Excavating minerals.
 — R. J., 1196, Apr. 1, Artificial fuel.
 Gear, A. S., & Stevens, E. M. (Lake), 2828, Aug. 27,
 [Weaving.
 Gedge, J. (Zimmerman), 2980, Sep. 11, Clipping animals.
 — J. (Trottier), 3045, Sep. 16, Varnishing tin.
 — J. (Garnier), 3181, Oct. 1, Braces.
 — W. E. (De Kercado), 104, Jan. 10, Water-meters.
 — W. E. (Goueslain), 202, Jan. 17, Cocks & vent pegs.
 Gedge, W. E. (Pasquier), 295, Jan. 25, Alarm clocks.
 — W. E. (Brunel-Bodin & Brunel-Marchand), 375,
 [Jan. 31, Blocking boots.
 — W. E. (Michelet), 403, Feb. 3, Converting motions.
 — W. E. (Rocheblave), 1118, Mar. 26, Spinning.
 — W. E. (Dallemagne & Triboulet), 1143, Mar. 27,
 [Photographic monocular glasses.
 — W. E. (Trottier), 1299, Apr. 8, Tin andterne plates.
 — W. E. (Garrigues & Fayet), 1800, Apr. 8, Para-
 [sols and umbrellas.
 — W. E. (Couette), 1418, Apr. 19, Tents.
 — W. E. (Paguette de Larret), 1907, May 27, Mow-
 [ing and reaping, &c.
 — W. E. (Perrissin & Co.), 2194, June 24, Boots
 [and shoes.
 — W. E. (Cornely), 2395, July 11, Overseaming and
 [embroidering.
 — W. E. (Fréville), 2396, July 11, Using heated
 [gases and steam.
 — W. E. (Alexandre-Balat), 2929, Sep. 6, Cleaning
 [and winnowing grain.
 — W. E. (Gras), 3956, Dec. 3, Buttons.
 — W. E. (Cornely), 3989, Dec. 4, Embroidering and
 [braiding.
 — W. E. (Société Alminana & Sarkissian, & Gigaroff),
 [4121, Dec. 15, Embroidering and braiding.
 — W. E. (Laujorrais), 4195, Dec. 20, Producing
 [colored designs on glass.
 Geering, H., 3284, Oct. 10, Safes and strong rooms.
 Geisenberger, E., & Cherpit, G. (Brookes), 2188, June 23,
 [Rotary-engines.
 Gendre, P. P. E. Count de, 4215, Dec. 23, Armour.
 Gense, C. (Lanier), 130, Jan. 13, Spring mattresses.
 George, B. G., 3486, Oct. 27, Transferring printed matter.
 — C., & Porter, H., 224, Jan. 18, Barometers.
 — F., 3616, Nov. 6, Railway points and switches.
 Gérard, E., & Thuillier, F. (Clark), 1603, May 3, Casks.
 Geraut, E., 1666, May 8, Aërated water-bottles and
 [stoppers.
 Gereke, K. L. H., 548, Feb. 14, Cartridges and bullets.
 — K. L. H., 707, Feb. 26, Rifles.
 — K. L. H. (Neuber), 3555, Nov. 1, Gas-regulators.
 Gerhard, F. W., & Caddick, J. W., 1477, Apr. 24, Iron
 [and steel.
 Gerring, M. H., 2044, June 9, Beam steam-engines.
 Giacomini, L. (Morgan-Brown), 687, Feb. 24, Carding-
 [engines.
 Gibbon, R., 2766, Aug. 21, Soap.
 Gibbons, G., & Paget, E., 1292, Apr. 8, Collecting and
 [removing hay, &c.
 Gibbs, G., & Pitt, T., 284, Jan. 24, Fire-arms.
 — H. H., 330, Jan. 28, Driving straps or bands.
 Gibson, E., Taylor, W. J., Bardsley, J. P., & Fletcher,
 [R. J., 866, Mar. 11, Felt hats, &c.
 — G., & Vowell, J., 289, Jan. 24, Governors.
 — J. H., & Lowry, G., 3261, Oct. 8, Heckling flax.
 — J. T., 3785, Nov. 20, Earth-closets.
 — R. H. (Andrews), 119, Jan. 11, Desks and seats.
 Giddings, W. H., & Heaton, W., 872, Mar. 11, Ball cocks
 [or valves.
 Giffard, P., Sublet, A., & Armengaud, J. (Smith), 627,
 [Feb. 19, Producing ice and cold.
 Gigaroff, A. H., & Société Alminana & Sarkissian
 [(Gedge), 4121, Dec. 15, Embroidering and braiding.
 Gigodot, R., 1026, Mar. 19, Ventilating furnaces.
 Gigodot, R. (Gardner), 3053, Sep. 17, Ventilating furnaces.
 Gilbee, W. A. (Procopé), 564, Feb. 15, Nets.
 — W. A. (Mégret), 959, Mar. 15, Stoppers for
 [bottles, &c.
 — W. A. (De Mutrécy), 2940, Sep. 6, Hydraulic-
 [engines.
 — W. A. (Wahlenberg), 3799, Nov. 21, Ammonia.

- Gilbert, D., 1065, Mar. 21, Buttons.
 — J., 2029, June 7, Motive-power.
- Gilchrist, W., & Thomas, M., 507, Feb. 11, Bricks, tiles, &c.
- Giles, B., 1366, Apr. 16, Cooking apparatus.
 — B., 2307, July 3, Heating water.
- Gillespie, J., 2646, Aug. 7, Clay pressing machines.
 — J., & Van Laak, L., 1062, Mar. 21, Bungs and bung inserters.
- W. H., 559, Feb. 15, Stopping tramway cars.
 — W. H., 2415, July 14, Stopping tramway cars.
- Gillet, P. J., 4259, Dec. 27, Carpets.
- Gillett, G. A., 754, Mar. 1, Preparing leather for covering spinning rollers.
 — J., 4180, Dec. 19, Steam-boilers.
- W., Bland, C., & Skaife, T., 4141, Dec. 17, Bell [musical instruments and bells.
- Gillman, A. W., & Spencer, S., 3056, Sep. 17, Brewing and treating beer.
- Gillon, J. F. A., & Dujardin, P. J., 1025, Mar. 19, Rolling mills.
- Gilmore, J., & Hodgson, D., 856, Mar. 10, Gill boxes.
- Gilquin, L., & De Lacauve, H. C. (Mewburn), 3339, [Oct. 15, Fire-escapes.
- Gingembre, L., 3412, Oct. 21, Hooks or clasps.
- Ginks, W., 3464, Oct. 25, Seaming or stitching skins.
- Girarbon, F. F. (Spence), 1188, Mar. 31, Electric-telegraphs.
- Girard, F. P., 2584, July 30, Compressing fuel, &c.
- Girdlestone, J. W., & Moule, H., 1867, May 23, Dry-closets, commodes, &c.
- Girdwood, R., 314, Jan. 27, Gas illuminating apparatus.
- Girol, O., Sartoris, H., Farinaux, I., Fichaux, A. (Boyd), 2951, Sep. 8, Furnaces and fireplaces.
- Glanding, J., Wilson, D. H., & Johnson L. (Hunt), 1791, [May 16, Packing.
- Glenbowiecki, A. F., 1785, May 16, Advertising.
- Glen, F. W. (Jensen), 3855, Nov. 26, Purifying mid-dlings.
- Glen, G., 176, Jan. 16, Railway and tramway rolling stock.
- Glendenning, J., 2159, June 20, Curtains or flexible partitions.
- Glover, J., 729, Feb. 27, Dry gas-meters.
 — W., 4115, Dec. 15, Looms.
- Godard, P. M. (Freret), 2079, June 12, Producing and reproducing drawings, &c. on porcelain.
- Goddu, L., 1313, Apr. 9, War vessels or monitors.
- Goettler, J. (Courvoisier), 1114, Mar. 26, Keyless watches.
- Goff, S., & Hewitt, B., 1088, Mar. 24, Raising & lowering weights.
- Gold, L., 3109, Sep. 23, Trousers, &c.
 — W. H., 1214, Apr. 2, Reservoir penholders.
- Goldsbrough, J., 1181, Mar. 31, Domestic fire-grates.
- Goldsmith, G., & Dilkes, J., 2041, June 9, Sluices and weirs.
- G., & Dilkes, J., 3857, Nov. 26, Gates or sluices.
- Goldsmith, G., & Digeon, E. (Clark), 1331, Apr. 10, [Dyes.
- Gombert, P. J. N. (Tamet), 3854, Nov. 26, Carriages.
- Gonzalez, B. A. (Johnson), 2479, July 18, Treating peat.
- Goodall, J. M., 2741, Aug. 19, Envelope folding machines.
 — R., 2791, Aug. 23, Treating, &c. impure water.
- Goodbehere, T., Brooks, S., & Harrison, G., 1804, May 17, [Spinning, &c.
- Goodchild, W. H., & Hay, S. F., 1003, Mar. 19, Joiners' clamps.
- Gooder, L., 1674, May 8, Setting and cleansing steam-boilers.
- Gooding, R. A., 2242, June 28, Securing corks in bottles.
- Goodman, A., & Bell, T., 641, Feb. 20, Furnaces.
 — G. H., 3361, Oct. 17, Stone-breakers.
- Goodrich, A. S., & Kornblum, M. (Newton), 2977, Sep. 10, [Feed-water indicator.
- Goodrich, G. W., & L. S., & Hillman, J. H. (Newton), [90, Jan. 8, Puddling furnaces.
- L. S. & G. W., & Hillman, J. H. (Newton), [90, Jan. 8, Puddling furnaces.
- Goodwin, A., 3728, Nov. 17, Tramways and railways.
- Goodwin, C. R. (Clark), 501, Feb. 11, Sewing-machines.
 — L., & West, S. A. (Lake), 933, Mar. 14, Rotary-pumps.
- Goodwin, W., 630, Feb. 20, Two-wheeled carriages.
- Goodyear, C., & Mills, D., 1965, May 31, Boots & shoes.
- Gordon, G. P. (Harrild), 3738, Nov. 18, Printing-machines.
- H. H., & Lawton, A. (Johnson), 2059, June 10, [Moving and raising coal, &c.
- Gordon, J., 10, Jan. 1, Envelopes.
- Gordon, J. F. (Lake), 1883, May 24, Harvesters.
- R. (Imray), 2209, June 25, Regulating, &c. delivery of liquids.
- Goreham, W., 665, Feb. 21, Cement kilns.
- Gorrill, R., & Purnell, J. J., 2850, Aug. 29, Bush and closure for casks, &c.
- Gottheil, R. (Abel), 3080, Sep. 19, Blue dye stuffs.
 — R. J. (Imray), 2506, July 22, Drilling rock.
- Goucher, J., 2674, Aug. 12, Thrashing-machines.
- Goueslain, A. (Gedge), 202, Jan. 17, Cocks & vent pegs.
- Gough, H. F., 993, Mar. 18, Printing.
 — J., 2106, June 13, Relief stamping, and printing presses.
- Gould, S., 3880, Nov. 27, Washing-machines.
- Gould, S. L. (Curtis), 769, Mar. 3, Paper-making.
- Goulstone, A. J., 3768, Nov. 20, Preserving organic substances; treating cattle disease.
- Goulton, W., 4186, Dec. 19, Wrappers or envelopes for presses.
- Gourlan, Z., & Paillard, E. A., 1818, May 20, Opening tins.
- Gow, A., 2472, July 18, Bichromate of potash, &c.
- Grafton, J. S., 2725, Aug. 16, Evaporating brine.
- Graham, D. A., 2245, June 28, Gas.
 — J., 1505, Apr. 25, Shirt front or garment.
 — J. C., 3114, Sep. 23, Obtaining fibres.
- Graham, J. C., Claughton, H. O., & McClure, W. B. (Haseltine), 13, Jan. 1, Back chain for cart saddles.
- Graham, L., 3734, Nov. 18, Economising fuel.
- Grandjean, P. (Bonneville), 4201, Dec. 22, Foot-warmers.
- Grange, G., 2950, Sep. 8, Paper for jacquard cards.
- W., 1032, Mar. 20, Engines for tramway cars, &c.
- Grant, D. C., 3507, Oct. 29, Marine signals.
- Granville, A., & Johnson, E. E., 2540, July 25, Treating cotton waste, &c.
- Gras, L. J. (Gedge), 3956, Dec. 3, Buttons.
- Gratrix, J., 833, Mar. 8, Fire-grates.
- Gratton, T., & Beal, J., 466, Feb. 8, Railway wheels and tires.
- Grawitz, W. J. S. (Clark), 703, Feb. 25, Candles, matches, fire-lighters, &c.
- Gray, E. W. D., 2054, June 12, Printing and folding paper.
 — E. W. D. & Sir J., 3292, Oct. 10, Damping paper.
 — John, 1617, May 5, Combustion of fuel; ventilating stokeholes.
- Sir John, 3095, Sep. 20, Damping paper.
- Sir John & E. W. D., 3292, Oct. 10, Damping paper.
- John W. (Seville), 1054, Mar. 21, Paving-blocks.
- John W. (Bianchini), 1430, Apr. 19, Storing oils, &c.
- Joseph W., 3098, Sep. 22, Decorticating rice.
- M., 3862, Nov. 26, Insulating telegraph wires.
- M., 3863, Nov. 26, Insulating telegraph wires.
- Gray, R. B., & Hersey, C. H. & F. C. (Morgan-Brown), [1233, Apr. 3, Granulators.
- Gray, T., 1486, Apr. 24, Paper-making.
- Greaves, H., Pearson, T. T., & Brickhill, J., 2253, [June 28, Woven fabrics.

- Greaves, T., & Bedington, R. J., 3872, Nov. 27, Curtain [poles.
T., Newman, J., & Edkins, C., 3685, Nov. 12, [Sleeve-links, solitaires, &c.
Grechi, C. C. (Newton), 1178, Mar. 29, Ascertaining [temperatures; indicating presence, &c. of fires.
Green, B., 1885, May 24, Sewage.
B., 3833, Nov. 24, Sewage.
F. M., & Bramley, E. H., 1961, May 31, Basels, [writing tablets, tables, &c.
H., & Barrow, J., 2889, Sep. 2, Supplying, ignit- [ing, &c. gas.
John, 3579, Nov. 4, Tilling land.
John R., & Plant, J., 3523, Oct. 30, Buttons.
Jonathan, 2762, Aug. 21, Blast furnaces.
T., 747, Feb. 28, Heating feed-water.
T., & Burrows, W., 3678, Nov. 11, Lawn-mowers.
W., 1307, Apr. 9, Automatic couplings.
W., 1710, May 10, Carriage breaks.
Greene, J. F. (Newton), 3899, Nov. 28, Finishing felted [goods.
Greener, H., 3025, Sep. 15, Decanters and jugs.
W. W., 3084, Sep. 19, Fire-arms.
Greenstreet, T. G., 3485, Oct. 27, Slop carts.
Greenwood, A., 927, Mar. 14, Spinning.
A. (Payne), 666, Feb. 21, Feeding machinery [in making caps, cartridge cases, &c.
F. A., & Asquith, S. E., 2213, June 25, Spinning.
G., Saville, T., & Morton, J., 568, Feb. 15, [Heating rooms, &c.
H. B., 2545, July 25, Applying electricity to [locks.
J., & Dennell, J., 2774, Aug. 21, Perforating [leather, &c.
T., 3238, Oct. 6, Grinding mortar, &c.
W., 585, Feb. 17, Sweeping roads.
Greer, F. H., 2101, June 13, Telegraphing; collecting elec- [tricity.
Greer, E. J., 2338, July 5, Rotary-engines.
Gregory, H. S., & Foot, W., 1371, Apr. 16, Hoops for [railway trucks, &c.
Greig, D., & Burton, R., 3940, Dec. 1, Actuating steam- [ploughs, &c.
Greindl, Baron G. (Wise), 1252, Apr. 4, Rotary-pumps.
Grey, E., 276, Jan. 23, Microscopes.
F. H., & Harris, W., 2119, June 16, Fire-arms.
Grice, J., & Harrison, E. J., 1625, May 6, Carriage steps.
R. W., 2339, July 5, Gas and coke.
Grieve, T. W., 294, Jan. 25, Theatre stages.
Griffin, E. F. (Griffin), 1507, Apr. 25, Economising fuel; [developing heat; & consuming smoke in furnaces.
Griffin, J. T. (Babbett, Miles & Hickey), 908, Mar. 13, [Carpet looms.
J. T. (Hickey), 1398, Apr. 17, Cutting screw [threads.
J. T. (Griffin), 1507, Apr. 25, Economising fuel; [developing heat & consuming smoke in furnaces.
J. T. (Remington), 1594, May 2, Ploughs, &c. [distributing manure.
P., 3450, Oct. 23, Manufacture of spirits.
Griffith, J., 2170, June 21, Steam-boilers.
Griffith, W. R., & Kirk, S. W. (Haseltine), 2904, Sep. 3, [Separating, &c. metals from ores.
Griffiths, J. R., Long, J., & Forsyth, A., 776, Mar. 4, [Photographic portraits.
R., 3817, Nov. 23, Steam-ships & screw-propellers.
Grigg, W., 786, Mar. 5, Applying electricity to cattle.
Grimbleby, F. & T., 1512, Apr. 26, Brick-making, &c.
T. & F., 1512, Apr. 26, Brick-making, &c.
Grimes, J., 1013, Mar. 19, Boots and shoes.
Grimm, L., & Corvin, J. (Hughes), 700, Feb. 25, Warm- [ing and heating.
Grimshaw, D., 3099, Sep. 22, Cut nail machinery.
J., 2999, Sep. 12, Rendering nails, &c. anti- [corrosive.
Grimston, T. A., 792, Mar. 5, Steam-engines.
Grindrod, J. T., 391, Feb. 1, Raising & floating vessels, &c.
Grinold, J., & Pearson, F. G., 3966, Dec. 3, Manure forks.
Griswold, H. J., 699, Feb. 25, Sewing-machines.
H. J., 3257, Oct. 8, Knitting-machinery.
H. J. (Clark), 4140, Dec. 17, Waterproofing [fabrics.
L., 2176, June 21, Sewing-machines.
Groebl, I., Rieter, H., & Wehrli, J. (Barlow), 4278, Dec. 30, [Embroidering-machines.
Grownere, N., & Zouboff, E. (Sauvée), 1497, Apr. 25, [Excavating, &c.
Grouilliers, H. de, & Siemens, G. (Abel), 2838, Aug. 28, [Soda and potash.
Grout, W. H. J., 463, Feb. 8, Carriage wheels.
Grout, W. L. (Schlesinger), 465, Feb. 8, Combination tool.
W. L. (Schlesinger), 2312, July 3, Tap for drawing [champagne, &c.
Grove, W. A. P. la, 2531, July 24, Mechanical toys.
Grover, J. W., 1230, Apr. 3, Washers.
Grüninger, O. (Bonneville), 2805, July 3, Steam-engine [breaks.
Guasco, H., Jourdeuil, P. E., & Parisot, F. (Abel), 2072, [June 11, Decorticating hop bines.
Guattari, A., 453, Feb. 7, Pneumatic telegraphs.
Guenard, J., 2075, June 11, Drying coffee and grain.
Guernsey, J. W. (Haseltine), 1352, Apr. 14, Shearing [animals.
Guerot, H., & Lesourd, O. (Freret), 2956, Sep. 9, Electric- [batteries.
Guerrero, A. Comte de St. Ange (Touaillon), 2184, [June 23, Horse-shoes.
Guglielmini, E. (Bonsfield), 3038, Sep. 16, Motive-power.
Guilfoyle, E., & Tom, W., 3347, Oct. 16, Candles.
Guille, M. (Wright), 2778, Aug. 21, Treating sicc alloys.
Gumpel, C. G., 9, Jan. 1, Lowering ships' boats.
Gurney, J., 3610, Nov. 6, Taps or valves.
Gustin, M., & Nobles, J. C. (Lake), 3919, Nov. 29, [Flash-light signals.
Gutensohn, A., 258, Jan. 22, Salt of tin, &c. from waste [tin-plate.
Guthrie, R., 3308, Oct. 11, Lamps.
Guy, C., Harling, J., Marsden, W., & Chesterman, J. & [W., 818, Mar. 6, Spinning.
Gye, L., 2440, July 15, Fire-arms.

H.

- Haas, B., 2231, June 27, Dial indicators.
B., 3945, Dec. 2, Watches.
F., & Folliot, F., 4170, Dec. 19, Heating and lighting.
T., 1994, June 3, Steam-boilers.
Hacking, T. & W. H., 1015, Mar. 19, Plaiting, &c. woven [fabrics.
W. H. & T., 1015, Mar. 19, Plaiting, &c. woven [fabrics.
Hackney, W., 2422, July 14, Ingot moulds.
Haddan, H. J. (Dangoise), 790, Mar. 5, Envelopes.
H. J. (Fairman), 1157, Mar. 28, Fasteners.
H. J. (Lever), 1630, May 6, Saltpetre.
J. C. (Dangoise), 2900, Sep. 3, Closing envelopes.
J. C. (Holtermann), 3586, Nov. 4, Disengaging [ships' boats.
Hadfield, R., 1787, May 16, Wheels, axles, and shafts.
R., 2700, Aug. 15, Tramway carriage wheels.
Hadwen, J. W., 417, Feb. 4, Mordanting, dyeing, &c.
J. W., & Randolph, A., 470, Feb. 8, Spinning.

Haggenmacher, C. (Murdoch), 2547, July 26, Winnow-
[ing and sorting grit, grain, &c.]
Haggett, W., 1461, Apr. 23, Treating metals to increase
[their strength, &c.]
Haghe, A., 3561, Nov. 1, Working signals.
Hahn, E. J., 2040, June 9, Hydraulic blast apparatus.
— H. (Basson), 1905, May 27, Wheels.
— H. (Jacoby), 3246, Oct. 7, Metallic alloys.
Haigh, J., Hoyle, H., & Whitley, N., 1016, Mar. 19,
[Card-setting machines.]
Haight, H. J., 966, Mar. 15, Artists' scrapers.
Hailstone, R. W., & McPhee, D., 1817, May 20, Ship's
[telegraph and indicator.]
Haithwaite, J., 2318, July 4, Chlorine.
Hale, E., & Matthews, C., 264, Jan. 23, Rolling metals.
— E. H., 2239, June 27, Bottle wrappers.
— W., 2607, Aug. 1, War rocket apparatus.
Haley, S., 978, Mar. 17, Stoves and fire-grates.
— S. & S. H., 323, Jan. 27, Hides and skins.
— S. H. & S., 323, Jan. 27, Hides and skins.
Halfpenny, G. W., 262, Jan. 23, Ink, incombustible
[paper, envelopes, and books.]
Hall, C., 2078, June 12, Jugs, &c., for pouring out liquids.
— G., 4022, Dec. 6, Securing door knobs to spindles.
— H. L., 1476, Apr. 24, Pulley racks for blind-cords.
Hall, H. M., & Bishop, T. B., 2555, July 26, Sewing
[machines.]
— J. H., & Eaton, R. (Lake), 26, Jan. 2, Manufac-
[turing meal, &c.]
Hall, P., & Ainsley, D., 2165, June 20, Boring machinery.
— S., 971, Mar. 15, Moulding and compressing fuel,
[peat, &c.]
Hall, T. (Wanzer), 2367, July 8, Sewing-machines.
— T. (Livsey), 2625, Aug. 5, Dovetail joints.
Hall, T., Smedley, T., & Bradbury J., 2986, Sep. 11,
[Sheathing ships.]
Hall, T. S., & Van Blarcom, A. L. (Haseltine), 3290,
[Oct. 10, Railway signals.]
Halladay, H., 2565, July 28, Buckles.
Hallam, S., 2865, Aug. 30, Safety-valves.
Hallez d' Arros, C. H. O., 1000, Mar. 18, Magneto-
[electric engines.]
Halmshaw, D., 586, Feb. 17, Fire-places, ovens, and
[boilers.]
Halpin, D., & Alliot, J. B., 2039, June 9, Sugar.
Hamblet, J., & Davies, G., 780, Mar. 4, Bricks, tiles,
[pipes, &c.]
Hambruch, G., 416, Feb. 4, Railway carriages.
Hamer, W., 3682, Nov. 12, Salt.
Hamilton, E. C., 2114, June 14, Manure.
— E. C., & Preston, W. R., 2450, July 16, Manure.
— E. C., Preston, W. R., & Jones, H., 187, Jan. 16,
[Manure.]
— James B., 387, Jan. 31, Organ reed pipes.
— James B., & Farmer, J., 1008, Mar. 19, Musical
[instruments.]
— John, 1126, Mar. 26, Sewing-machines.
— John, & Forbes, J., 3162, Sep. 29, Rotary-en-
[gines and pumps.]
— Joseph, & Western, C. R., 3203, Oct. 3, Band
[saw machines.]
— W., 3402, Oct. 21, Steam-engines; feeding
[boilers.]
Hamilton, W. (Haseltine), 3258, Oct. 8, Steam lubricators.
Hammer, G. M., 1303, Apr. 9, School desks.
Hämmerle, J. (Imray), 3704, Nov. 14, Clearing wire
[cards.]
Hammett, S. H., 1805, May 19, Regulating water-supply
[to closets, &c.]
Hammond, C. E., 1654, May 7, Windmills.
— H. W. (Shaw), 1652, May 7, Lowering boats.
— H. W. (Justice), 2686, Aug. 13, Pile driving.

Hammond, H. W. (Justice), 2871, Sep. 1, Compound
[blower.]
Hampson, H., Hellewell, A., Kenyon, J., & Chantler, W.,
[1899, May 26, Heating hat brims.]
Hampton, J., 2699, Aug. 15, Condensing steam; purify-
[ing, &c. water.]
— T., 842, Mar. 8, Armour and other plates.
Hanauer, J., 2745, Aug. 19, Table-cloths.
Hancock, J., 2672, Aug. 11, Twist-lace machines.
Handyside, H., 2013, June 5, Locomotive-engines.
— H., 4124, Dec. 15, Railway Rolling stock.
— J. B., & Alley, S., 3904, Nov. 29, Joining rails.
— J. B., & Alley, S., 4085, Dec. 11, Joining rails.
Hannart, L., & Mamelzer, T. (Clark), 397, Feb. 1, Ticket-
[ing shop goods, &c.]
Hansen, W., 1810, May 19, Fitting and joining iron for
[foundation plates, &c.]
Hanson, C., 1936, May 29, Cutting coal.
— J., & Hunter, T., 1620, Apr. 26, Thinning tur-
[nips, &c.]
Harcourt, A. G. V., & Fison, F. W., 2685, Aug. 13, Pu-
[rifying gas and extracting products.]
Harder, A., 2967, Sep. 10, Reaping and mowing.
Harding, G. E. (Haseltine), 2064, June 11, Furnaces.
Harding, T. R. & T. W., 2499, July 21, Pointing wire.
— T. W. & T. R., 2499, July 21, Pointing wire.
Hare, E., & Ardron, J. O., 998, Mar. 18, Rotary screens.
Hargreaves, J., & Robinson, T., 680, Feb. 22, Sulphates
[of soda and potassa.]
— J., & Robinson, T., 764, Mar. 3, Soda and
[potassa.]
— J., & Robinson, T., 828, Mar. 7, Sulphates
[of soda and potassa; chlorine.]
— J. C., 1675, May 9, Preventing boiler explo-
[sions.]
— J. E., 2372, July 9, Horticultural bed or
[frame.]
Harley, J. L., 3755, Nov. 19, Furnaces.
Harling, J., Marsden, W., Chesterman, J. & W., & Guy,
[C., 818, Mar. 6, Spinning.]
Harlow, B., 1127, Mar. 26, Wringing, mangling, and
[washing.]
— B., & Pilling, W., 480, Feb. 10, Stench-traps &
[grids.]
Harmer, T., & Toulson, J. A. H., 335, Jan. 28, Freeing
[glass surfaces from carbon, &c.]
Harper, J. R., 1251, Apr. 4, Gas-lamp blow-pipe.
Harrild, H. (Gordon), 3738, Nov. 18, Printing-machines.
Harrington, G. F., 3341, Oct. 15, Propelling ships.
— J., 3081, Sep. 19, Locks or fastenings.
— J., 4055, Dec. 9, Binding paper.
— R., 3867, Nov. 26, Umbrellas and parasols.
Harris, C., 2804, Aug. 26, Paper bags.
Harris, D. (Lake), 2675, Aug. 12, Stretching boots and
[shoes.]
Harris, F. (Patterson), 2645, Aug. 7, Propelling ships.
— I. B., 1383, Apr. 16, Washers, packing, &c.
— I. B., 1540, Apr. 28, Deckle straps.
— I. B., 3885, Nov. 27, Hose and tubing.
— I. B., 3886, Nov. 27, Flexible tubing.
— P. & R., & Love, W., 1546, Apr. 29, Regulating
[speed of marine engines.]
— R. & P., & Love, W., 1546, Apr. 29, Regulating
[speed of marine engines.]
Harris, S. (Penn-Gaskell), 3055, Sep. 17, Weighing-scales.
Harris, T., 942, Mar. 14, Window-sashes; sash pulleys.
— W., & Grey, F. H., 2119, June 16, Fire-arms.
— W. R., 2473, July 18, Moulds for toothed wheels, &c.
— W. R., & Holding, J., 419, Feb. 5, Shuttle tips.
Harrison, A. G., 3183, Oct. 1, Making twine and cord.
— B., 4257, Dec. 27, Traversing lifting jacks.
— B., & Conder, E., 32, Jan. 2, Motive-power.

- Harrison, C., & Pearson, W., 121, Jan. 11, Umbrellas, &c.
 — C. W., 1, Jan. 1, Air-gas.
 — C. W., 435, Feb. 5, Air-gas.
 — C. W., 528, Feb. 12, Oxygen.
 — C. W., 848, Mar. 8, Air-gas.
 — C. W., 1072, Mar. 22, Carburetted air-gas.
 — C. W., 1784, May 15, Gas.
 — C. W., 3526, Oct. 30, Gas.
 — C. W., 4165, Dec. 18, Gas.
 — E. J., & Grice, J., 1625, May 6, Carriage steps.
 — F., 2488, July 19, Cement for joining leather, &c.
 — G., Goodbehere, T., & Brooks, S., 1804, May 17, [Spinning, &c.
 — H., & Butler, J. W., 882, Mar. 11, Peat-fuel; [treating clay, &c.
 — H., & Page, F., 1514, Apr. 26, Artificial fuel.
 — James, 2848, Aug. 29, Sharpening, &c. teeth [of saws.
 — James, 3760, Nov. 19, Preserving food.
 — Harrison, James (Wood & Clarke), 1772, May 15, Feed [and low-water signal for steam-boilers.
 — Harrison, Joseph, & Anderson, B., 1985, June 3, Pack- [ing leathers for hydraulic purposes.
 — Joseph, & Anderson, B., 3812, Nov. 22, Steam- [engines.
 — W. S., 1717, May 12, Time-signals; control- [ling horological instruments, &c.
 — W. W., 577, Feb. 15, Knives and forks.
 — Harrold, H. E., & Clarke, E. & G., 3924, Dec. 1, Econo- [mising fuel.
 — Harrop, J., 1166, Mar. 28, India-rubber hose, &c.
 — J., 3219, Oct. 4, Taps or valves.
 — Harston, C. G., 2989, Sep. 11, Fire-arms.
 — Hart, G. W., 315, Jan. 27, Generating steam.
 — G. W., 741, Feb. 28, Open fire-grates.
 — G. W., 8688, Nov. 8, Smelting ores.
 — G. W., 4159, Dec. 18, Smelting ores.
 — H. W., 3564, Nov. 1, Umbrellas.
 — H. W., 3913, Nov. 29, Shirts, &c.
 — Hartley, F. W., & Spice, R. P., 2603, Aug. 1, Carburettors.
 — J., 2329, July 4, Boilers of hot-water apparatus.
 — R., 81, Jan. 8, Singeing yarn.
 — Hartshorn, E., Toone, R., & Archer, H. Z., 1018, Mar. 19, [Lace-making.
 — Hartsuff, J. H., & Douds, D., 2649, Aug. 7, Steam-pumps.
 — Harvey, James, 3416, Oct. 21, Stills.
 — James J., 1124, Mar. 26, Washing bottles.
 — John, & Pryer, G., 3315, Oct. 13, Ballasting ships.
 — Harvie, W., 1403, Apr. 18, Gas lamps.
 — W., 1404, Apr. 18, Lamps.
 — Harwood, G. & R., Scholes, J., & Seymour, T., 2452, [July 16, Steam-boiler flues.
 — Harwood, I. K., & Newcomb, W. (Haseltine), 967, Mar. 15, [Pump pistons and valves.
 — Harwood, R. & G., & Scholes, J., & Seymour, T., 2452, [July 16, Steam-boiler flues.
 — Haseltine G. (McClure, Graham, & Cloughton), 13, Jan. 1, [Back chain for cart saddles.
 — G. (Waller & Fowler), 77, Jan. 8, Hospital beds.
 — G. (Haycock), 126, Jan. 11, Projectiles.
 — G. (Perkins), 128, Jan. 11, Rolling metals.
 — G. (Meylert), 213, Jan. 18, White lead; puri- [fying carbonic acid gas.
 — G. (Purdie), 233, Jan. 20, Washers.
 — G. (Dean), 259, Jan. 22, Dressing millstones.
 — G. (Nichols), 303, Jan. 25, Hinges.
 — G. (Alexander), 326, Jan. 28, Converting cast [iron into steel.
 — G. (Smith), 351, Jan. 29, Torpedo launches.
 — G. (Cookerly), 459, Feb. 8, Hoes.
 — G. (Dodge), 516, Feb. 12, Screw-propellers [and rudders.
 — Haseltine, G. (McCarty, Olds, & Mason), 681, Feb. 22, [Economising fuel.
 — G. (Campbell), 779, Mar. 4, Holders for pen- [cils, &c.
 — G. (White & Knight), 806, Mar. 5, Lamps.
 — G. (Dougherty), 932, Mar. 14, Casting steel.
 — G. (Harwood & Newcomb), 967, Mar. 15, [Pump pistons and valves.
 — G. (Du Bois), 1250, Apr. 4, Elevating.
 — G. (Guernsey), 1352, Apr. 14, Shearing animals.
 — G. (Janney), 1517, Apr. 26, Railway couplings.
 — G. (Howlett & Onderdonk), 1622, May 5, [Paper bags.
 — G. (Pope & Sawyer), 1641, May 7, Separating [liquids, &c.; refining liquids; galvanic batteries.
 — G. (Oldershausen), 1697, May 10, Lighting, [&c. gas-burners.
 — G. (Harding), 2064, June 11, Furnaces.
 — G. (Alexander), 2212, June 25, Sewing-ma- [chines.
 — G. (Stanton), 2217, June 26, Extinguishing fires.
 — G. (Tesseyman & Howard), 2255, June 28, [Valve-gear.
 — G. (Hunter), 2257, June 28, Inhaling apparatus.
 — G. (Poage), 2270, June 30, Watering columns.
 — G. (Ross), 2284, July 2, Looms.
 — G. (Lee), 2287, July 2, Reaping and mowing.
 — G. (Lloyd), 2311, July 3, Distilling, &c. tur- [pentine; bleaching resin.
 — G. (Davis & Armstrong), 2353, July 8, Tanning.
 — G. (Eayrs & Stuart), 2354, July 8, Rotary- [engines.
 — G. (Raynolds, Hidden, Richardson, Molyneux, [& Rich), 2600, July 31, Preparing & packing [water-colors.
 — G. (Lloyd), 2761, Aug. 20, Solvents.
 — G. (Kirk & Griffith), 2904, Sep. 3, Separating, [&c. metals from ores.
 — G. (Bass), 2905, Sep. 3, Cleaning condensers.
 — G. (Crichterson), 2911, Sep. 4, Burnishing [photographs.
 — G. (Hoyt), 2943, Sep. 6, Valves.
 — G. (Whitehead & Atherton), 3047, Sep. 17, [Spinning.
 — G. (Forward), 3060, Sep. 18, Tanning.
 — G. (Whitney), 3064, Sep. 18, Printers' type.
 — G. (Providence Tool Co.), 3228, Oct. 4, Fire- [arms.
 — G. (Hamilton), 3258, Oct. 8, Steam lubricators.
 — G. (Du Pont & Du Pont), 3273, Oct. 9, Gun- [powder.
 — G. (Hall & Van Blarcom), 3290, Oct. 10, Rail- [way signals.
 — G. (Lidgerwood), 3344, Oct. 15, Rotary-engines.
 — G. (Wyss & Studer), 3487, Oct. 27, Engines, [pumps, &c.
 — G. (Wood), 3537, Oct. 30, Metallic tubing [and leaf.
 — G. (Powers), 3578, Nov. 3, Boxes, cases, &c.
 — G. (Henderson), 3652, Nov. 8, Railway breaks.
 — G. (Oldfield), 3700, Nov. 13, Looms.
 — G. (National Horse Nail Co.), 3737, Nov. 18, [Horse-shoe nails.
 — G. (Averell), 4031, Dec. 6, Stitching books.
 — G. (Gates), 4051, Dec. 9, Looms.
 — G. (Ricketts), 4070, Dec. 10, Separating tin.
 — G. (Lindsay), 4118, Dec. 13, Implements for [cutting, gripping, &c.
 — G. (Ellis), 4261, Dec. 29, Clasps for stocking [supporters.
 — G. (Nichols), 4276, Dec. 30, Hinges.
 — Haskin, D. C. (Bousfield), 2221, June 26, Tunnelling.

Hashins, D. (Strode, Mackenzie, & Williams), 4192, [Dec. 20, Gas-stoves.
 Hastie, J., & Cameron, J. G., 2613, Aug. 1, Steering [apparatus.
 Hatch, J. W., 3111, Sep. 23, Boots and shoes.
 — R., 2947, Sep. 8, Pickers for looms.
 Hatfull, R., 281, Jan. 24, Preventing, &c. incrustation in [steam-boilers.
 Hathaway, F. C., 3140, Sep. 26, Purses, pocket books, [portmonnaies, letter-cases, &c.
 — H., 2521, July 23, Furnaces.
 Hatschek, M., 2042, June 9, Brewing.
 Hattersley, C., T. & R., & Ashley, H. M., 2862, Aug. 30, [Stove-grates.
 — R., C. & T., & Ashley, H. M., 2862, Aug. 30, [Stove-grates.
 — T., R. & C., & Ashley, H. M., 2862, Aug. 30, [Stove-grates.
 Hatton, E. H. & G., 2884, Sep. 2, Binding, &c. window- [blind cords.
 — G. & E. H., 2884, Sep. 2, Binding, &c. window- [blind cords.
 Hatzfeld, A. (Mewburn), 2411, July 12, Preserving wood.
 Hanberg, H. W., 2775, Aug. 21, Separating tin from [terne-plate scrap.
 Havenhand, J., 1167, Mar. 28, Cutting teeth in sickles [and reaping-machines.
 Haweis, H. R., 983, Mar. 17, Ecclesiastical and other [decorations.
 Hawes, L. P. (Kidd), 2097, June 13, Steam-traps.
 — M. E. (Hunt), 3556, Nov. 1, Horse-shoes.
 Hawken, E., 3889, Nov. 28, Fuel-economisers.
 Hawkins, G. L., & Lewis, S. S., 1543, Apr. 28, Cleaning [cotton-waste, &c.
 — J., 3690, Nov. 13, Portable fire-grates.
 — J. G., 220, Jan. 18, Gas.
 — J. G., 3822, Nov. 22, Gas.
 Hawksley, T. P., 1353, Apr. 15, Specula.
 — T. P., 1354, Apr. 15, Stethoscopes.
 Haworth, G., & Humber, J., 662, Feb. 21, Producing [vapor to soften yarn, &c.
 Hay, G. R., 1138, May 27, Whetstone flour.
 — S. F., & Goodchild, W. S., 1003, Mar. 19, Joiners' [clamps.
 Haycock, S. H. (Haseltine), 126, Jan. 11, Projectiles.
 Hayercraft, F. T., 4200, Dec. 22, Fire-lighters.
 — G., 3605, Nov. 5, Washing casks and bottles.
 Haydock, G., & Swainson, E. T., 1743, May 13, Warp [dressing machines.
 Hayek & Schenck, Bart. (Bonneville), 310, Jan. 27, Ar- [tificial stone.
 Hayes, C. F., 3534, Oct. 30, Coupling for driving-gear.
 — W. W., & Forrest, J. A., 2907, Sep. 4, Waterclosets.
 Haynes, C. E. (Curtis), 1910, May 27, Clothes wringers.
 Hays, J. J. & W. B., 437, Feb. 6, Centrifugal hydro-extractors.
 — W. B. & J. J., 437, Feb. 6, Centrifugal hydro-extractors.
 Hayward, I., 870, Mar. 11, Rolling wire rods, hoops, &c.
 — W. F., 2050, June 10, Iron safes and fastenings.
 Head, J., 923, Mar. 13, Steam-engines and generators.
 — W. B., 3827, Nov. 24, Ventilating drains, &c.
 Henley, B. D., 1788, May 16, Cast steel and furnaces.
 Healy, F., 1069, Mar. 21, Raising and treating peat.
 Heap, Joseph, 1989, June 3, Dry closets, commodes, &c.
 — Joshua, 1765, May 14, Screwing metal tubes.
 Hearson, T. A., 1878, May 24, Speed indicators.
 Heatherington, A., 3424, Oct. 22, Separating metals, [ores, &c.
 Heaton, C. & G. W., 4174, Dec. 19, Using steam, air, &c. [expansively.
 — G. W. & C., 4174, Dec. 19, Using steam, air, &c. [expansively.
 — R. G., 388, Feb. 1, Fishing reels.

Heaton, W., & Giddings, W. H., 872, Mar. 11, Ball cocks [or valves.
 Heaven, A., 1039, Mar. 20, Furniture covers.
 Heberlein, J. (Imray), 3496, Oct. 28, Coupling, &c. rail- [way carriages.
 Hebert, H., 3932, Dec. 1, Pianofortes.
 Hedderwick, P. D., & Batho, W. F., 3708, Nov. 14, Ex- [cavating under water, &c.
 Hedges, K. W., 436, Feb. 6, Steam-boilers and engines.
 Hediard, A. (Clark), 2644, Aug. 6, Propelling vessels.
 Hedley, T. A., 2543, July 25, Gas.
 Heilmann, A. (Ray), 1960, May 31, Furnaces.
 Heinemann, H., 1061, Mar. 21, Utilising exhaust steam.
 Hellewell, A., Hampson, H., Kenyon, J., & Chantler, W., [1899, May 26, Heating hat brims.
 Helm, E., 2451, July 16, Looms.
 — W. H., 2196, June 24, Looms.
 Hemingway, J., & Rainbow, W. (Vaughan), 297, Jan. 25, [Railway keys and wedges.
 Henchman, W., 1657, May 8, Preparing fibres for spinning.
 Henderson, A. C. (Demaily), 591, Feb. 18, Filters.
 — A. C. (Demaily & Bruneaux), 1644, May 7, [Hydro-caloric motors.
 — A. C. (Edgcome), 1645, May 7, Fetting for [furnaces.
 — A. C. (Chamon & Co.), 2259, June 30, Gauges.
 — A. C. (Dubreuil), 2783, Aug. 22, Watches [and clocks.
 — A. C. (Leconte & Sons), 2946, Sep. 8, Sewing- [machines.
 — A. C. (Saint Anne), 3959, Dec. 3, Match-boxes.
 — C. J., 4111, Dec. 13, Heating buildings.
 — J., 1278, Apr. 7, Ship-building.
 — J., 1442, Apr. 21, Propelling ships.
 Henderson, J. (Day), 1850, May 22, Railway bars, &c.
 Henderson, J. C. A., 758, Mar. 1, Treating peat.
 — J. C. A., 2860, Aug. 30, Treating peat.
 — J. C. A., & Eley, M., 3851, Nov. 26, Neck-ties.
 — N. McF., 1327, Apr. 10, Distilling oils.
 Henderson, T., & Wright, W. (Brewer), 3201, Oct. 2, [Sewing-machines.
 Henderson, W., 3296, Oct. 10, Shunting trains.
 — W., 3307, Oct. 11, Railway signals.
 — W. C., 1369, Apr. 16, Horticultural and other [frames; glazing same.
 Henderson, W. M. (Haseltine), 3652, Nov. 8, Railway [breaks.
 Hendrickx, P. J. A., & Kunstaecker, J. J., 4198, Dec. 22, [Portable hoists.
 Henkel, H. (Dresse, Laloux & Co.), 1080, Mar. 24, Fire-arms.
 Henley, T. F., 212, Jan. 18, Meat extract.
 — W. T., & Riley, E., 254, Jan. 22, Puddling fur- [naces.
 Henman, W. J., 2273, June 30, Reaping and mowing.
 Henard, A., & Raymond, L. (Hughes), 3340, Oct. 15, [Expansion and cut-off gear.
 Henry, A., 1582, May 2, Fire-arms.
 — A., 1716, May 12, Fire-arms.
 — A., 2158, June 20, Fire-arms.
 Henry, J. E. (Johnson), 2975, Sep. 10, Rotatory-engines.
 Henry, M. (Dupuch), 33, Jan. 2, Water-gauges.
 — M. (Collet & De Lavi lusse), 650, Feb. 20, Treat- [ing marine plants.
 — M. (Pinel & Lecœur), 651, Feb. 20, Preparing [fibres for spinning.
 — M. (Auteuil de Savignon), 667, Feb. 21, Sugar.
 — M. (Deprez), 2876, Sep. 1, Steam-engines.
 — M. (Destibeaux), 4211, Dec. 23, Soap.
 — M. (Peltier & Paillard), 4237, Dec. 24, Boxes for [holding edible substances.
 Henson, H. H., 191, Jan. 17, Shaping, &c. iron.
 — H. H., 1568, Apr. 30, Road-making.

- Henson, H. H., 1891, May 26, Road paving.
 — H. H., 1968, May 31, Roadways.
 — W. F., 1580, May 2, Making raised or cut-piled fabrics.
 Hermann, I. (Clark), 2963, Sep. 9, Diamond cutting.
 Herrick, S. K., 2185, June 23, Sewing-machine treadles.
 Hersey, C. H. & F. C., & Gray, R. B. (Morgan-Brown),
 [1233, Apr. 3, Granulators.
 — F. C. & C. H., & Gray, R. B. (Morgan-Brown),
 [1233, Apr. 3, Granulators.
 Herzberg, A. & I. (Johnson), 2058, June 10, Umbrella frames.
 — I. & A. (Johnson), 2058, June 10, Umbrella frames.
 Hess, A., 3692, Nov. 13, Extracting oils, &c. and re-covering solvent used.
 Hetherington, J. M., & Oldfield, J., 3620, Nov. 6, Mules for spinning.
 Hewett, S. B., 1793, May 16, Rotary fire-grates.
 Hewitt, B., & Goff, S., 1088, Mar. 24, Raising and lowering weights.
 — H., 2444, July 16, Penholders.
 Hey, J. G., & Sugden, R., 1276, Apr. 7, Utilising gas for heating.
 Heyne, J. F. Colfs- (Hunt), 425, Feb. 5, Kilns.
 Heys, W. E., 3674, Nov. 11, Cupola and blast furnaces.
 — W. E. & Scott, G. L., 3912, Nov. 29, Cupola and blast furnaces.
 Heywood, G., & Duckworth, J., 2303, July 3, Kiers.
 Heywood, J. (Heywood), 4003, Dec. 5, Horse-collars.
 Heywood, B. (Heywood), 4003, Dec. 5, Horse-collars.
 Heyworth, E., & Wilkinson, N., 1147, Mar. 27, Steam-boilers.
 — E., & Wilkinson, N., 1890, May 26, Steam-boilers.
 — E., & Wilkinson, N., 4125, Dec. 15, Steam-boilers.
 Hibbert, G., & Cooke, J., 2570, July 29, Turbines.
 — H., 3518, Oct. 29, Window-sash fasteners.
 Hickey, P. (Griffin), 1398, Apr. 17, Cutting screw threads.
 — P., Babbett, H. M., & Miles, C. W. (Griffin),
 [908, Mar. 13, Carpet looms.
 Hickinbotham, F., Marshall, W., & Adams, S., 3206,
 [Oct. 3, Fastenings for doors of railway waggons.
 Hickisson, J., 2463, July 16, Teats, rings, &c. for infants.
 Hicks, J., 3907, Nov. 29, Portable fire-escapes.
 — J. J., 3647, Nov. 8, Thermometers.
 Hidden, T. B., Richardson, L., Molyneux, E. L., Rich, A.,
 [& Reynolds, C. T. (Haseltine), 2600, July 31,
 [Preparing and packing water colors.
 Hide, C., 2308, July 3, Decorating & waterproofing walls.
 Higgins, F. H. W., & Davies, W. H., 2576, July 29,
 [Telegraphs.
 — J., & Whitworth, T. S., 1874, May 23, Spinning.
 — J., & Whitworth, T. S., 2961, Sep. 9, Spinning.
 Higginson, A., 2104, June 13, Regulating supply of elastic fluids to engines.
 Higgs, W. P., & Perch, W., 3977, Dec. 4, Supplying compressed air for motive-power.
 High, R., 1402, Apr. 18, School desks.
 Highton, H., 85, Jan. 8, Electric-telegraphs.
 — H., 545, Feb. 13, Electric-telegraphs.
 — H., 1178, Mar. 29, Electric telegraphs; induction coils.
 — H., 4277, Dec. 30, Electric-telegraphs.
 Hill, A. & W., 3778, Nov. 20, Umbrellas and parasols.
 — G., 3231, Oct. 6, Money checking apparatus.
 — H., 1207, Apr. 1, Grates and fire-places.
 — H. W., & Warsop, G., 3222, Oct. 4, Cutting coal.
 — J., & Owen, W., 583, Feb. 17, Stove grates.
 — J. & L. C., 2872, Sep. 1, Roadways and tramways.
 — J., & Massey, B., 3313, Oct. 13, Steam-boilers.
 Hill, L., 2710, Aug. 15, Regulating speed of marine engines.
 — L. C. & J., 2872, Sep. 1, Roadways and tramways.
 — R., 1563, Apr. 30, Fire-arms.
 — U. C., 2597, July 31, Cellulated bell pianofortes.
 — W. & A., 3778, Nov. 20, Umbrellas and parasols.
 Hillman, J. Hart (Clark), 1227, Apr. 2, Cleaning and separating ores.
 — J. Hartwell, & Goodrich, G. W. & L. S. (Newton),
 [90, Jan. 8, Puddling furnaces.
 Hills, L. McD. (Hughes), 2756, Aug. 20, Panelling and moulding machines.
 Hinchcliffe, E., 2056, June 10, Woollen and other fabrics.
 — E., 4004, Dec. 5, Flocking fabrics.
 Hindley, G., 178, Jan. 16, Dressing stones.
 Hinds, E. C., 282, Jan. 24, Preventing accidents on railway platforms.
 Hinks, J., & Holland, H., 2047, June 9, Gas; utilising residual products.
 Hintoh, F., 2714, Aug. 15, Peat-fuel.
 Hipkins, E., 165, Jan. 15, Iron safes.
 Hirsiger, J. (Warner), 749, Mar. 1, Railway breaks.
 Hitchcock, R. (Palmer), 772, Mar. 4, Railway carriage ventilators.
 — R., Sigourney, J. M., & Rosa, W. van V. (Johnson), 356, Jan. 29, Lamps.
 — R., Sigourney, J. M., & Rosa, W. van V. (Johnson), 3212, Oct. 3, Lamps.
 Hitchman, T. B., 2925, Sep. 5, Sewing-machines.
 Hobrow, W. F., & Darby, F. S. S., 2858, Aug. 30, Sawing stones.
 Hobson, A., & Williams, W. C., 2930, Sep. 6, Velocipedes.
 — H., 1271, Apr. 5, Pyrometers.
 Hockley, W., 1382, Apr. 16, Preserving wood.
 Hodges, J. F. W., 1672, May 8, Bleaching textile fibres, &c.
 — R., 781, Mar. 4, Butt hinges.
 Hodges, S. H. (Hunt), 874, Mar. 11, Boots and shoes.
 Hodges, S. H. (Johnson), 3845, Nov. 25, Boots & shoes.
 — S. H., & Wheeler, H. F., 1380, Apr. 16, Boots and shoes.
 Hodgkinson, H., & Ardern, J., 3230, Oct. 4, Preparing fibres.
 Hodgson, Charles, 2518, July 23, Sustainers for sashes, doors, &c.
 — Christopher & W., & Needham, J., 2724, Aug. 16, Weighing.
 — D., & Gilmore, J., 856, Mar. 10, Gill boxes.
 — E., 2122, June 16, Revolving cameras.
 — G., 2818, Aug. 27, Looms.
 — T. & T., & Stephenson, J., 1690, May 9, Shut-tles for weaving.
 — W., & Lea, F., 3895, Nov. 28, Spinning & twisting.
 — W., & Thompson, M. & W., 1842, May 21, Looms.
 — W. & C., & Needham, J., 2724, Aug. 16, Weighing.
 Hodson, H. F., 93, Jan. 8, Implements for gardening, &c.
 — W., 1754, May 14, Gutters and spouting.
 — W., 3923, Sep. 5, Bricks, tiles, &c.
 — W., 4203, Dec. 22, Tanning ales.
 Hoey, T., 712, Feb. 26, Water-waste preventers; utilising excremental matters, &c.
 Hoffman, O. C. (Maitland), 2834, Aug. 28, Gas.
 Hoffmark, B. (Schpakowsky), 2359, July 8, Driving belts.
 — B. (Wiener), 3731, Nov. 17, Gunpowder.
 Hogg, F., 2087, June 12, Neckties.
 Hoghton, F. R., 2343, July 7, Treating and curing deafness.
 Holbrook, T., & Moseley, J., 3367, Oct. 17, Looms.
 Holden, E., 1184, Mar. 31, Treating wool & other fibres.
 — H., 1103, Mar. 25, Axles and axle-boxes.
 — R., & Woodacre, W., 3259, Oct. 8, Looms.
 Holding, J., 3271, Oct. 9, Nose-bags.
 — J., & Harris, W. R., 419, Feb. 5, Shuttle tips.
 — J., & Nicholson, W. H., 3752, Nov. 19, Whips.
 Holland, A. T. (Johnston), 1912, May 28, Cutting of garments.

Holland, H., 1225, Apr. 2, Umbrellas and parasols.
 — H., 2971, Sep. 10, Gas.
 — H., & Hinks, J., 2047, June 9, Gas; utilising [residual products].
 — W., 3466, Oct. 25, Umbrellas and parasols.
 — W., & Boin, A., 3547, Oct. 31, Umbrellas and [parasols].
 — W., Dutton, S. T., & Clunes, T., 2034, June 7, [Railway points and signals].
 — W. T., 3961, Dec. 3, Fetting for furnaces.
 — W. T., 4216, Dec. 23, Fireproof cements and [bricks].
 Holliday, C., E. & T., 3407, Oct. 21, Dyeing.
 — C., E. & T., 3408, Oct. 21, Dyeing.
 — E., C. & T., 3407, Oct. 21, Dyeing.
 — E., C. & T., 3408, Oct. 21, Dyeing.
 — R., 3584, Nov. 4, Dyeing.
 — T., C. & E., 3407, Oct. 21, Dyeing.
 — T., C. & E., 3408, Oct. 21, Dyeing.
 Hollings, A., & Vanstone, S. (Fairbank), 3440, Oct. 23, [Nuts and tubes].
 — A. E. (Baxter), 4059, Dec. 9, Seed-drills.
 Hollingworth, A., 4250, Dec. 27, Dressing potatoes.
 — J., & Hutchinson, J., 1464, Apr. 23, Weaving.
 Hollis, E., 953, Mar. 15, Fire-arms.
 Holman, S., 115, Jan. 11, Gas-retorts.
 — S., 136, Jan. 13, Raising & lowering gas-purifier lids, &c.
 — S., 3699, Nov. 13, Steam-pumps and engines.
 Holmes, A. E., 3150, Sep. 26, Railway breaks.
 — F. H., 2917, Sep. 4, Fog-signals.
 — James & J., 941, Mar. 14, Shuttles for weaving.
 Holmes, James A. (Johnson), 1221, Apr. 2, Casting metals.
 Holmes, Joseph E., & Boynton, L. W., 98, Jan. 9, Centrifugal machines; kilns, &c.
 — Joshua & J., 941, Mar. 14, Shuttles for weaving.
 Holroyd, J., 1562, Apr. 30, Cricketing.
 Holt, H. P., 876, Mar. 11, Steam engines & condensers.
 — J., Shaw, S., & Sleath, J. S., 2596, July 31, Preparing fibres for spinning, &c.
 — T. M., & Dunderdale, W. J., 531, Feb. 13, Tables.
 Holten, S. E., & Varley, F. H., 2446, July 16, Counting, [indicating, and signalling].
 Holtermann, O. (Haddan), 3586, Nov. 4, Disengaging ships' [boats].
 Holyoake, W., & Brown C., 3723, Nov. 15, Clipping [animals].
 — W. R., 3075, Sep. 19, Fixing transparencies.
 — W. R., 3250, Oct. 7, Transparencies.
 Honigmann, F. (Wirth), 1864, May 22, Ropes, rods, &c; [pump plungers].
 Hood, W. C., 1915, May 28, Liquid-meters.
 Hookham, G., & H. J., 240, Jan. 21, Metallic box fastenings.
 — H. J., & G., 240, Jan. 21, Metallic box fastenings.
 Hooper, W., 3780, Nov. 23, Telegraph cables.
 — W., & Dunlop, J. M., 3997, Dec. 4, Telegraph [cables].
 Hopcraft, T. S., Castro, A. de S. A. e Condi de Penama-maor, & Castro, A. P. de S. e, 2484, July 19, [Citric acid; tartaric acid; alcohol].
 Hope H. E. (Chantrell), 2707, Aug. 15, Anchors.
 Hopkins, M., 2690, Aug. 13, Sewing-machines.
 — M., 3653, Nov. 10, Sewing-machines.
 — W., & Picking, G. G., 1745, May 13, Steam [pumping machinery].
 Hopkinson, J., & J. A., 4236, Dec. 24, Steam-boilers.
 — J. A., & J., 4236, Dec. 24, Steam-boilers.
 — J. T., 181, Jan. 16, Window-fasteners.
 Hopwood, G. M., & Hunt, E., 783, Mar. 4, Treating cat-chus, cutch, &c.

Hordley, E., Newton, J., & Edgerton, J., 3772, Nov. 20, [communicating apparatus].
 Hore, C., 871, Mar. 11, Horse-clippers.
 Hornblower, L., 3714, Nov. 15, Fire-proof buildings.
 Horner, F., & W. W., & Sibley, J., 4252, Dec. 27, Bottles.
 — G., 188, Jan. 16, Hackling flax.
 — G., & Dobson, A., 862, Mar. 10, Steam-boilers.
 — G., & Dobson, A., 2037, June 7, Steam-boilers.
 — W. W. & F., & Sibley, J., 4252, Dec. 27, Bottles.
 Hornstedt, N. W., 2808, Aug. 26, Communicating in [trains, &c].
 Horrocks, J., 690, Feb. 24, Cleansing textile fabrics and [materials].
 — J., 2578, July 30, Furnaces.
 Horse Nail Co., National (Haseltine), 3737, Nov. 18, [Horse-shoe nails].
 Horse-shoe Co., Rhode Island (Lake), 4210, Dec. 23, [Horse-shoes].
 — Rhode Island (Lake), 4263, Dec. 29, [Rolling metals].
 Horsley, T., 204, Jan. 17, Closing cartridge cases.
 Horsman, P. S., 2853, Aug. 29, Spinning and doubling.
 Hosking, A. W., 2248, June 28, Combined cheque, fac-simile and receipt book.
 — J., 343, Jan. 28, Safety-valves.
 Hotchkiss, B. B. (Lake), 2698, Aug. 14, Wood pavement.
 Hough, E. J., 659, Feb. 21, Life-boats.
 Houghton, F. B., 811, Mar. 6, Paper-making.
 — F. B., 902, Mar. 12, Filtering.
 — F. B., 1311, Apr. 9, Paper-making.
 Hounsell, W., 934, Mar. 14, Copper tubes.
 Housley, W., 2814, Aug. 27, Steam-boilers.
 Howard, E. I., & Tesseyman, J. (Haseltine), 2255, June 28, [Valve-gear].
 Howard, J., & Bousfield, E. T., 1237, Apr. 3, Steam-boilers.
 — S., 3662, Nov. 11, Ornamenting straw hats.
 Howarth, G., S. & R., 3766, Nov. 20, Paper-making.
 — J. B. H., 2364, July 8, Artificial manure.
 — R., G. & S., 3766, Nov. 20, Paper-making.
 — S., R. & G., 3766, Nov. 20, Paper-making.
 Howatson, A., 1742, May 13, Furnaces.
 — A., & Williams, O., 1812, May 19, Furnaces.
 Howden, J., 3278, Oct. 9, Towing vessels.
 Howe, W. H. I. (Clark), 1428, Apr. 19, Cans for pre-serving fruit, &c.
 Howell, J. B. (Richards), 3274, Oct. 9, Punches.
 Howes, J., Richards, P., & Mott, H. H. & C. F., 2593, [July 31, Raising, &c. window-blinds].
 Howitt, J. K., & Wood, T., 3093, Sep. 20, Stable-fittings.
 Howlett, E. J., & Onderdonk, J. P. (Haseltine), 1622, [May 5, Paper bags].
 — E. J., & Onderdonk, J. P. (Robinson), 2973, [Sep. 10, Paper bags].
 Hoyois, A., 2490, July 19, Steam-engines.
 Hoyle, H., Haigh, J., & Whitley, N., 1016, Mar. 19, Card [setting machines].
 Hoyt, H. I. (Haseltine), 2943, Sep. 6, Valves.
 Hubert, P., & Boissel, V., 4011, Dec. 5, Stoppering [bottles].
 Huch, E. H., 288, Jan. 24, Soup farina.
 Huckvale, H. W., 3671, Nov. 11, Railway switches.
 Huddart, G. A., 1474, Apr. 23, Railway fish plates.
 — G. A., 2681, Aug. 12, Railway switches.
 Hugall, C. E., 177, Jan. 16, Window fasteners.
 Hughan, W. H., 2760, Aug. 20, Treating sewage.
 Hughes, E. T. (Van Loo-Wauters), 63, Jan. 6, Towing [canal boats].
 — E. T. (Snoeck & de Labarre), 321, Jan. 27, [Threads].
 — E. T. (Grimm & Corvin) 700, Feb. 25, Warm-ing and heating.

- Hughes, E. T. (*Kellogg*), 855, Mar. 10, Furcoated fabrics.
 — E. T. (*Daudenart & Verbert*), 938, Mar. 14, [Baryta and strontia].
 — E. T. (*Daudenart & Verbert*), 939, Mar. 14, [Treating liquors used in scouring wool].
 — E. T. (*Buckley & Sawyer*), 1017, Mar. 19, Cur- [tain fixtures].
 — E. T. (*Rodier & Bates*), 1467, Apr. 23, Fire- [arms].
 — E. T. (*Chillingworth*), 1779, May 15, Spade [bayonets].
 — E. T. (*Bushnell & Merriman*), 1854, May 22, [Compressed air motors].
 — E. T. (*Fairbanks*), 2045, June 9, Locomotives.
 — E. T. (*Morton*), 2308, June 25, Picker motion.
 — E. T. (*Lush*), 2383, July 10, Woollen fabrics.
 — E. T. (*Sargent*), 2595, July 31, Door-calls or [bells].
 — E. T. (*Peck*), 2670, Aug. 11, Berth mattress [and life-preserver].
 — E. T. (*Sargent*), 2683, Aug. 13, Applying castors.
 — E. T. (*Hills*), 2756, Aug. 20, Panelling and [moulding machines].
 — E. T. (*Daudenart & Verbert*), 3013, Sep. 13, [Baryta and strontia].
 — E. T. (*Daudenart & Verbert*), 3014, Sep. 13, [Treating liquors used in scouring wool].
 — E. T. (*Heward & Raymond*), 3340, Oct. 15, Ex- [pansion and cut-off gear].
 — E. T. (*Blythe*), 3437, Oct. 22, Treating wood, &c.
 — E. T. (*Chillingworth*), 3696, Nov. 13, Spade [bayonets].
 — E. T. (*Wood*), 3834, Nov. 24, Bolt-cutting.
 — E. T. (*Wheeler*), 4265, Dec. 29, Horse-shoe ma- [chines].
 — H., 1096, Mar. 25, Marking, &c. fabrics, paper, [and metals].
 — P., 96, Jan. 9, Dishes and plates.
 Hugon, P., 1593, May 2, Manometers.
 Huish, H., 1363, Apr. 15, Lowering ships' boats.
 Hull, W., 994, Mar. 18, Suspending, driving, &c. millstones.
 Hulsenberg, H. A., 1441, Apr. 21, Working slide-valves.
 Humber, J., & Haworth, G., 662, Feb. 21, Producing [vapor to soften yarn, &c.].
 Humphries, E., & Ridley M., 1935, May 29, Thrashing [machines].
 Humphris, J., & Freestone, J. W., 2729, Aug. 18, Treat- [ing oxide of iron for sulphur, &c.].
 Humy, P. R. de Faucheux d', 2457, July 16, Inkstands.
 — P. R. de Faucheux d', 2465, July 17, Tea and [coffee caddies].
 — P. R. de Faucheux d', 2536, July 25, Calendars.
 — P. R. de Faucheux d', 2640, Aug. 6, Bottle-stop- [pers].
 — P. R. de Faucheux d', 4000, Dec. 5, Fastening [for bottle-stoppers, &c.].
 Hunt, B. (*Anders & Welch*), 40, Jan. 3, Printing telegraphs.
 — B. (*Culfs-Heyne*), 425, Feb. 5, Kilns.
 — B. (*Reynoso*), 799, Mar. 3, Iodine.
 — B. (*Hodges*), 874, Mar. 11, Boots and shoes.
 — B. (*Mendheim*), 1410, Apr. 18, Firing ceramic [ware, &c.].
 — B. (*Meijh & Voelter*), 1421, Apr. 19, Paper, &c.
 — B. (*Glanding, Wilson, & Johnson*), 1791, May 16, [Packing].
 — B. (*Reynoso*), 2582, July 30, Preserving food.
 — B. (*Miller & Middleton*), 2793, Aug. 25, Locks [and keys].
 — B. (*Bate*), 2794, Aug. 25, Compound faucets.
 — B. (*Hawes*), 3556, Nov. 1, Horse-shoes.
 — B. (*Brassat*), 3669, Nov. 11, Carpets.
 — B. (*Reynoso*), 3717, Nov. 15, Extracting iodine.
 Hunt, B. (*Swain & Todd*), 4280, Dec. 31, Printing presses.
 — B. (*Reynoso*), 4290, Dec. 31, Nutritive hygienic [compounds].
 — C. W., 3790, Nov. 21, Operating rail or tram- [ways and cars, and loading, &c. same].
 — E., 766, Mar. 3, Dyeing and fixing colors.
 — E., & Hopwood, G. M., 783, Mar. 4, Treating [catechus, cutch, &c.].
 — James, 2237, June 27, Artificial fuel.
 — James, 2385, July 10, Preparing peat.
 — John, 3524, Oct. 30, Cutting meat, &c.
 — S., 142, Jan. 14, Building blocks.
 — W., 2709, Aug. 15, Marking boards for games.
 — W., 2944, Sep. 8, Sulphates of soda and potash.
 Hunter, A. G. (*Berry, Randolph, & Eichbawm*), 2177, [June 21, Gas].
 Hunter, C. D. (*Haseltine*), 2257, June 28, Inhaling ap- [paratus].
 Hunter, G., & Shaw, E., 1145, Mar. 27, Steam-boilers.
 — J. W., 3279, Oct. 9, Heating water.
 — T., & Hanson, J., 1520, Apr. 26, Thinning tur- [nips, &c.].
 Huntington, F. A., 1753, May 14, Steam-boilers and [furnaces].
 Huntoon, H. P. (*Brown*), 3762, Nov. 19, Pipe tongs.
 Hupton, H. E., & Durham, F., 1951, May 30, Indicating [or checking apparatus].
 Hurd, F., & Simpson, E. T., 2594, July 31, Motive-power [generator, &c.].
 Hurlbut, H. A., *Wainwright, H. H., & Wisewell, M. N.* [(Johnson), 2840, Aug. 28, Gas].
 Hurst, J. W., 1247, Apr. 4, Life-rafts.
 — J. W., & Snoultten, W. G., 3217, Oct. 4, Life-rafts.
 Hus, H., 1587, May 2, Lamps.
 Hutchin, G., 4117, Dec. 15, Biscuit baking ovens.
 Hutchings, A. J. H., 588, Feb. 17, Preparing vinegar for [pickling].
 Hutchinson, J., & Hollingworth, J., 1464, Apr. 23, Weaving.
 Hutchison, D., & Bridges, W. G., 551, Feb. 14, Removing, [&c. incrustation in boilers].
 — R., 3287, Oct. 10, Treating oils and fats.
 — W., 3894, Nov. 28, Steam-engines.
 Hutton, D., 3239, Oct. 6, Dredging machines.
 Huxley, C. B., 3112, Sep. 23, Motive-power.
 Huxtable, J., 363, Jan. 30, Turn-wrest ploughs.
 Hyatt, T., 2788, Aug. 23, Illuminating roofs, &c.
 — T., 3256, Oct. 8, Applying asbestos.
 — T., 3380, Oct. 18, Plating iron, &c.
 — T., 3381, Oct. 18, Architectural and engineering [constructions].
 — T., 3658, Nov. 10, Buildings.
 — T., 3684, Nov. 12, Applying asbestos.
 — T., 3788, Nov. 20, Artificial stone, soda, &c.
 — T., 4241, Dec. 24, Applying asbestos.
 Hyatt, T. (*Johnson*), 2866, July 8, Gratings.
 Hyatt, T. (*Brown*), 3007, Sep. 13, Windmills.
 Hyde, John & J., 3236, Oct. 6, Iron.
 — John & J., 3649, Nov. 8, Stone-crushers.
 — John & J., & Aldis, O. C. V., 3761, Nov. 19, Alarm [lamps for mines].
 — Joseph & J., 3236, Oct. 6, Iron.
 — Joseph & J., 3649, Nov. 8, Stone-crushers.
 — Joseph & J., & Aldis, O. C. V., 3761, Nov. 19, [Alarm lamps for mines].
 Hydes, T., & Bennett, J. E., 2336, July 5, Building material.
 — T., & Bennett, J. E., 3242, Oct. 6, Heating feed- [water].
 Hypertiel, A. (*Mills*), 2550, July 26, Stopping motion of [cages or loads down mines, &c.].

I.

- Ibbetson, J., 378, Jan. 31, Leather.
 Icely, W. S., 3594, Nov. 5, Knife for opening meat tins.
 Ilston, G., & Shakespear, T., 3015, Sep. 15, Sewing-machines.
 Imray, J., 325, Jan. 8, Drying, roasting, calcining, &c.
 — J. (Quinbel), 309, Jan. 27, Steam-boilers.
 — J. (Loiseau), 1623, May 5, Smelting zinc.
 — J. (Otto), 1628, May 6, Caloric-engines.
 — J. (Luton & Lefèvre), 1724, May 12, Chalk-fuel.
 — J. (Fayol), 1852, May 22, Supporting respiration [and light in suffocating atmospheres, &c.
 — J. (Chamberlin), 1945, May 29, Anchors.
 — J. (Otto), 1946, May 29, Caloric-engines.
 — J. (Gordon), 2209, June 25, Regulating, &c. delivery of liquids.
 — J. (Gottheil), 2506, July 22, Drilling rock.
 — J. (Chamberlin), 2647, Aug. 7, Anchors.
 — J. (Société des Mines de Lens), 2669, Aug. 11, [Discharging and loading goods.
 — J. (Peyer), 3350, Oct. 16, Clearing steam pipes of [water, &c.; regulating temperature of liquids.
 — J. (Heberlein), 3496, Oct. 28, Coupling, &c. railway carriages.
 — J. (Hämmerle), 3704, Nov. 14, Clearing wire cards.
 Ingall, W. G., & Parsons, C. J., 2191, June 23, Coffin [furniture.
 Ingermann, A. (Jurgenson), 2972, Sep. 10, Weeder and [seed gatherer.
 Ingham, J., & Barber, J. (Burns), 2711, Aug. 15, Generating steam.
 Inglis, W., & Spencer, J. F., 2325, July 4, Steam-engines.
 Ingram, J. G., 3563, Nov. 11, Flexible metal piping.
 Ingram, W. J. de B. (Lake), 4144, Dec. 17, Ventilating [windows.
 Ireland, W., (Pink), 263, Jan. 23, Casting ingots for tyres.
 Isaacs, H. A. & J. M., 2319, July 4, Vessels for edible [substances.
 — J. M. & H. A., 2319, July 4, Vessels for edible [substances.
 Isherwood, T. H., 3413, Oct. 21, Fire-grates and furnaces.
 Ivison, M. W., 1385, Apr. 17, Dip for sheep, &c.
 Ivory, J. H., 717, Feb. 26, Reducing mineral substances [to powder.

J.

- Jack, A., 1981, June 2, Thinning root crops.
 Jackson, F. W., 2799, Aug. 26, Raising building materials, &c.
 — H., & Milburn, R., 2004, June 5, Drying, &c. [peat.
 — H., & Milburn, R., 2855, Aug. 30, Fuel; filtering, [&c. sewage; moulding plastic materials.
 — J., 595, Feb. 18, Attaching discs to, and preventing slipping of ropes.
 — J. A., & Oglesby, J., 897, Mar. 12, Fuel-economisers.
 — W., & Olley, G., 338, Jan. 28, Heating feed-water.
 Jacobsen, F., 266, Jan. 23, Treating sewage.
 — F., 2454, July 16, Treating sewage.
 — F., 2455, July 16, Treating sewage.
 Jacoby, J. E. (Hahn), 3246, Oct. 7, Metallic alloys.
 Jacquemart, F. (Newton), 4204, Dec. 22, Aluminium.
 Jacquemin, A., 1663, May 8, Speed regulator or governor.

- Jacquet, F. A., 4229, Dec. 24, Gas-cooking apparatus.
 — F. A., 4230, Dec. 24, Gas-stoves.
 Jagger, I., Miner, T. F., & Ray, B. (Newton), 2960, [Sep. 9, Blast furnaces.
 Jagger, J., & Naylor, J., 4173, Dec. 19, Looms.
 — W., Smith, J., Pilling, J., & Stuart, C., 3963, [Dec. 3, Safety-valves.
 James, H. B., 1248, Apr. 4, Seats of row-boats.
 — J., & Burden, S., 1095, Mar. 25, Gathering and [tying wheat, &c.
 — J. H., 456, Feb. 7, Ornamental surfaces.
 — L., 3359, Oct. 17, Sea-weed for ornamental purposes.
 Jamieson, A., 1715, May 12, Vulcanising india-rubber.
 Janney, E. H. (Haseltine), 1517, Apr. 26, Railway [couplings.
 Jaques, F., 815, Mar. 6, Applying trade-mark labels.
 — J. F., 3370, Oct. 17, Generating heated air.
 Jarman, H., 164, Jan. 15, Steering ships.
 Jasper, C. E. F., & Donath, F. A. H., 407, Feb. 3, Cigars.
 Jaynor, A., 66, Jan. 6, Steering and hoisting.
 — A., 1012, Mar. 19, Automatic telegraphs.
 — A., 1684, May 9, Automatic telegraphs.
 — A., 2577, July 30, Pneumatic telegraphs.
 Jeandron-Ferry, L. D. (Johnson), 1293, Apr. 8, Boots [and shoes.
 Jeannolle, A., & Persoz, J. (Thomas), 4196, Dec. 20, [Printing ink.
 Jefferys, J. C. W., 1897, May 26, Scarf rings.
 Jeffs, J., 527, Feb. 12, Ironing and glazing fabrics, &c.
 Jelley, R. S. C., & Jones, R. C., 271, Jan. 23, Cutting [tenons.
 Jenkin, F., & Ricketts, F. H., 1886, May 24, V pulleys.
 — F., & Thomson, Sir W., 2086, June 12, Telegraphic apparatus.
 Jenkins, B., & Adams, J., 968, Mar. 15, Air and steam-engines.
 — W., 2197, June 24, Preventing leakage in casks.
 Jenkinson, W., 3463, Oct. 24, Spinning.
 Jennings, H., & Gardner, W., 2586, July 30, Door knobs [and spindles.
 Jensen, P. (Olsen), 149, Jan. 14, Printing telegraphs.
 — P. (Erichsen & Maardt), 602, Feb. 18, Coke [ovens, &c.
 — P. (Erichsen), 1055, Mar. 21, Manures.
 — P. (Erichsen & Maardt), 1073, Mar. 22, Coke [ovens, &c.
 — P. (Erichsen), 1499, Apr. 25, Roofing.
 — P. (Johnston), 2650, Aug. 7, Railroad rails.
 — P. (Jespersen), 3657, Nov. 10, Reducing rags.
 — P. (Glen), 3855, Nov. 26, Purifying middlings.
 Jenty, C. (Clark), 4294, Dec. 31, Gas and fuel.
 Jerome, E., & Wheeler, S., 1649, May 7, Paper boxes.
 Jespersen, H. W. (Jensen), 3657, Nov. 10, Reducing rags.
 Jewitt, H. (Rose), 55, Jan. 4, Toys.
 Jeyes, J. & O., 1535, Apr. 28, Fuel.
 — O. & J., 1535, Apr. 28, Fuel.
 Job, A. M., 1186, Mar. 31, Knife-cleaning boards.
 Jobbins, W. F. (Fischer), 2018, June 6, Washing glasses, [dishes, &c.
 Jobbins, W. F. (Lake), 3393, Oct. 20, Folding, &c. textile fabrics.
 Jobert, E. L. H., Count d'Epineuil, 829, Mar. 7, Stoves.
 Jobson, A., 1258, Apr. 4, Coke ovens: utilising waste [heat.
 — E. W., 1066, Mar. 21, Waterclosets, urinals, &c.
 — E. W., G. & J., 836, Mar. 8, Open fire-places.
 — G., de J. & E. W., 836, Mar. 8, Open fire-places.
 — J., E. W. & G., 836, Mar. 8, Open fire-places.
 Johnson, C. G. (McComb), 1835, May 20, Connecting [metallic bands, &c.
 Johnson, A., 2985, Sep. 11, Sewing-machines.

- Johnson, A. F. (Lake), 371, Jan. 30, Fire-alarm & water-supply apparatus.
- Johnson, C., 1896, May 26, Traction machinery.
- C. & E., & Pabst, G. F., 2877, Sep. 1, Presses [for colour printing.
- E. & C., & Pabst, G. F., 2877, Sep. 1, Presses [for color printing.
- E. D., 2643, Aug. 6, Preserving steel pens.
- E. E., & Granville, A., 2540, July 25, Treating [cotton-waste, &c.
- G., & Shaw, J., 1372, Apr. 16, Steam-engines.
- I. C., & Rowe, S. T., 2769, Aug. 31, Condensing, [&c. noxious fumes.
- Johnson, J. B. (Hodges), 3845, Nov. 25, Boots & shoes.
- Johnson, J. H. (Pearl & Battles), 18, Jan. 1, Spinning.
- J. H. (Picq), 43, Jan. 3, Transmitting power.
- J. H. (Stuart & Vandermeersch), 155, Jan. 14, [Fire-arms.
- J. H. (Digney, Digney, Lartigue, & Forest), [247, Jan. 21, Railway signal.
- J. H. (Coignet, Son, & Co.), 305, Jan. 25, Manure.
- J. H. (Dietz), 319, Jan. 27, Animal traps.
- J. H. (Hitchcock, Sigourney, & Rosa), 356, [Jan. 29, Lamps.
- J. H. (Pagliari), 405, Feb. 3, Liquid fuel.
- J. H. (Masson), 406, Feb. 3, Tin-foil.
- J. H. (Reckendorfer), 443, Feb. 6, Combined [pencil and eraser.
- J. H. (Kitson & Carr), 521, Feb. 12, Valves.
- J. H. (Pasmore), 522, Feb. 12, Lawn-mowers.
- J. H. (Ostrander), 557, Feb. 14, Nut blanks.
- J. H. (Wellby), 721, Feb. 26, Railway carriage [dust screens.
- J. H. (Purvis), 733, Feb. 27, Ginning cotton.
- J. H. (Purvis), 734, Feb. 27, Ginning cotton.
- J. H. (Ward), 1001, Mar. 18, Laying pipes [across rivers, &c.
- J. H. (Riot & Roux), 1089, Mar. 24, Steam- [generators.
- J. H. (Farmer), 1107, Mar. 25, Threading needles.
- J. H. (Tito-Vignolo), 1150, Mar. 27, Treating [and applying fibres.
- J. H. (Passieux), 1151, Mar. 27, Drawing rollers [of mules.
- J. H. (Fontaine), 1180, Mar. 31, Magnets.
- J. H. (Holmes), 1221, Apr. 2, Casting metals.
- J. H. (David & Fichet), 1222, Apr. 2, Ozone.
- J. H. (Ulery), 1234, Apr. 3, Steam-engines.
- J. H. (Jeandron-Ferry), 1293, Apr. 8, Boots & [shoes.
- J. H. (Bergeron), 1308, Apr. 9, Removing sand [banks.
- J. H. (Damien & Kister), 1390, Apr. 17, Pul- [leys and blocks.
- J. H. (Croissant & Bretonnière), 1489, Apr. 24, [Coloring matters.
- J. H. (Palmcrantz, Winborg, & Unge), 1739, [May 13, Battery guns.
- J. H. (Bélégic), 1898, May 26, Ship-building.
- J. H. (Osborne), 1947, May 29, Speed indicators.
- J. H. (Herzberg & Herzberg), 2058, June 10, [Umbrella frames.
- J. H. (Lawton & Gordon), 2059, June 10, Mov- [ing and raising coal, &c.
- J. H. (Sellers & Sellers), 2060, June 10, Rolling [mills.
- J. H. (Lobdell), 2061, June 10, Casting metals.
- J. H. (Thibault), 2296, July 2, Inkstands.
- J. H. (Hyatt), 2366, July 8, Gratings.
- J. H. (Dillé), 2378, July 9, Reaping machines.
- J. H. (Davidson), 2438, July 15, Steam washing [apparatus.
- Johnson, J. H. (Sellers & Sellers), 2461, July 16, Steam- [boiler injectors.
- J. H. (Gonzalez), 2479, July 18, Treating peat.
- J. H. (Côte), 2486, July 19, Motive-power.
- J. H. (Gallet), 2487, July 19, Steel.
- J. H. (Bertrand), 2688, Aug. 13, Umbrellas & [parasols.
- J. H. (Lobdell), 2750, Aug. 20, Steam-engines.
- J. H. (Payne), 2798, Aug. 26, Brick-making.
- J. H. (Pernot), 2819, Aug. 27, Puddling furnaces.
- J. H. (Wainwright, Wisewell, & Hurlbut), 2840, [Aug. 28, Gas.
- J. H. (Pitte, Aldrich, & Marble), 2932, Sep. 6, [Cutting flock.
- J. H. (Henry), 2975, Sep. 10, Rotatory engines.
- J. H. (Sellers & Sellers), 2982, Sep. 11, Mo- [chanical puddling.
- J. H. (Rinek), 3051, Sep. 17, Heckling machines.
- J. H. (Stevens, Steele, & Condict), 3052, Sep. 17, [Valves.
- J. H. (Kitson & Carr), 3059, Sep. 18, Valves.
- J. H. (Wharton), 3133, Sep. 25, Railway switches.
- J. H. (David), 3190, Oct. 2, Ozone.
- J. H. (Hitchcock, Sigourney & Rosa), 3212, [Oct. 3, Lamps.
- J. H. (Malo & Robin), 3275, Oct. 9, Asphalte [pavement.
- J. H. (Eymael), 3360, Oct. 17, Boilers.
- J. H. (Whelpley), 3371, Oct. 18, Skates.
- J. H. (Galland & Breitmayer), 3375, Oct. 18, [Telegraphic code.
- J. H. (Perroy), 3377, Oct. 18, Obtaining fresh [water from sea-water.
- J. H. (Gauthey), 3630, Nov. 7, Cartridges.
- J. H. (Mazeron), 3698, Nov. 13, Spoons, forks, &c.
- J. H. (Société Létang & Brissard), 3711, Nov. 14, [Printing.
- J. H. (Agudio & Cail & Co.), 3724, Nov. 15, [Propelling carriages; raising, &c. shaft cages.
- J. H. (Baker), 3744, Nov. 18, Iron and steel.
- J. H. (Richards, Wait, Shapley, & Jones), 3745, [Nov. 18, Controlling draught, &c. in locomotives.
- J. H. (Winans), 3820, Nov. 22, Organs.
- J. H. (De Meritens & Kresser), 3937, Dec. 1, [Paper-pulp.
- J. H. (Muhé), 3938, Dec. 1, Glazing photographs.
- J. H. (Frezon), 4027, Dec. 6, Treating fabrics.
- J. H. (Schmid), 4071, Dec. 10, Oscillating cylin- [der engines.
- J. H. (Cottrell), 4102, Dec. 13, Cutting, &c. [stone.
- J. H. (Galland), 4123, Dec. 15, Holding and [guiding pen-holders, &c.
- J. H. (Carto), 4147, Dec. 17, Motive-power.
- J. H. (Bailleux-Lemaire & Co.), 4221, Dec. 23, [Treating fibres.
- J. H. (Pernot), 4291, Dec. 31, Puddling iron [and steel.
- J. H. (Asbury), 4292, Dec. 31, Blowing ma- [chines.
- J. M., 3601, Nov. 5, Dyeing & bleaching yarns.
- Johnson, J. O. (Bonneville), 2342, July 7, Fluid-meters.
- L., Wilson, D. H., & Glanding, J. (Hunt), 1791, [May 16, Packing.
- Johnson, R. W. (Rettger), 3208, Oct. 3, Artificial fuel.
- Samuel, & Telling, W. A., 1807, May 19, Dry [gas-meters.
- Samuel H., 2891, Sep. 2, Separating free sulphur.
- Sidney, 3927, Dec. 1, Fire-escapes.
- T., 3174, Sep. 30, Railway signals.
- W., 730, Feb. 27, Fire-grates; heating boilers, &c.
- Johnston, B., 2229, June 27, Preservative composition.

Johnston, F., & Cotton, R. T., 1202, Apr. 1, Looms.
 — J., & Langlands, G., 2160, June 20, Shuttles.
 Johnston, J. A. (Holland), 1912, May 28, Cutting of garments.
 — J. B. (Jensen), 2650, Aug. 7, Railroad rails.
 Johnstone, J., & Brown, W., 524, Feb. 12, Ploughs.
 — J., & Torr, C. W., 1452, Apr. 22, Furnaces.
 Jolley, W. R., 1029, Mar. 20, Life-rafts.
 Jones, A. T., & Cooley, Le R. C. (Lake), 2220, June 26, [Preserving meat, fruit, &c.
 — C. F., Richards, J., Wait, G. W., & Shapley, E. C. (Johnson), 3745, Nov. 18, Controlling draught, [&c. in locomotives.
 Jones, Daniel, 1872, May 23, Motive-power.
 — Daniel, 4023, Dec. 6, Motive-power.
 — David, 372, Jan. 30, Forcing fluid or liquid into [furnaces, &c.
 — E., 386, Jan. 31, Cartridges.
 — E. A. & J. A., 3378, Oct. 18, Iron and steel.
 — E. P., 2621, Aug. 2, Bale-ties.
 — E. P., 2957, Sep. 9, Railway breaks.
 — F. L., & Longworth, T., 298, Jan. 25, Looms.
 — G., 1828, May 20, Tobacco pellets.
 — Henry, Hamilton, E. C., & Preston, W. R., 187, [Jan. 16, Manure.
 — Hugh, 1042, Mar. 20, Cork life-belts.
 — J., 891, Mar. 12, Furnaces; substitute for coal, &c.
 — J. A. & E. A., 3378, Oct. 18, Iron and steel.
 — J. G., 2797, Aug. 25, Rotary-engines.
 — J. G., 3637, Nov. 8, Cutting coal, &c.
 — J. S., 283, Jan. 24, Basting meat.
 — M. V., 2515, July 23, Screw-propellers.
 — R., 451, Feb. 7, Safety-lamps.
 — R. C., & Jelly, R. S. C., 271, Jan. 23, Cutting tenons.
 — R. J., 894, Mar. 12, Drying waste alkaline solutions.
 — R. K., 857, Mar. 10, Discharging cargo from ships.
 — S. B., 261, Jan. 23, Railway carriages.
 — T., 3037, Sep. 16, Rendering wood unflammable.
 — T., & Becker, L. M., 2893, Sep. 3, Sewing-machines.
 — Walter, 2995, Sep. 11, Propelling & steering ships.
 — William, 3982, Dec. 4, Sewing looped fabrics.
 — William H., 3592, Nov. 4, Uniting mill bands, &c.
 — Wright, 118, Jan. 11, Valves.
 — Wright, 3297, Oct. 10, Regulating temperature.
 Jordan, C., 3606, Nov. 6, Railways; transferring rolling-stock.
 Jordan, W. A. (Lake), 4208, Dec. 22, Bale-ties.
 Jordinson, R., & Mitchell, W. H., 2173, June 21, Card-ing-engines.
 Joseph, J., 440, Feb. 6, Brooches and bouquet holders.
 Joslin, W., 341, Jan. 28, Furnaces.
 Jourdeuil, P. E., Parisot, F., & Guasco, H. (Abel), 2072, [June 11, Decorticating hop bines.
 Jowett, E., & Ball, O., 2610, Aug. 1, Jacquard engines.
 — J., 1880, May 24, Reeds or slays.
 Jubber, H., 3661, Nov. 10, Door fasteners.
 Juengling, H. (Wise), 307, Mar. 5, Air-gas.
 Jukes, R., 736, Feb. 27, Furnaces or cupolas.
 — R., 845, Mar. 8, Consuming smoke, &c.
 Jurgenson, C. (Ingermann), 2972, Sep. 10, Weeder and [seed gatherer.
 Justice, P. S. (Hammond), 2686, Aug. 13, Pile-driving.
 — P. S. (Hammond), 2871, Sep. 1, Compound [blower.

K.

Kaiser, A., 3992, Dec. 4, Weighing grain, &c.
 Kalmar, A. (Paget), 5, Jan. 1, Magnetic compass cards.

Kane, C. I. (Newton), 1238, Apr. 3, Shuttle motions.
 Kappmeyer, E., 2792, Aug. 25, Sewing-machines.
 Kastner, G. E. F. (Tongue), 1091, Mar. 24, Musical in-struments.
 Kaulbach, E., 4245, Dec. 26, Railways.
 Kavanagh, E. (Lake), 1859, May 22, Gas purifying and [regulating.
 Kay, S. & T., 1975, May 31, Medical compounds.
 — S. & T., 1976, May 31, Stoppers and stoppering [bottles.
 — T. & S., 1975, May 31, Medical compounds.
 — T. & S., 1976, May 31, Stoppers and stoppering [bottles.
 — T. B., & Mills, F., 379, Jan. 31, Carding-engines.
 Keen, A., 1296, Apr. 8, Screws.
 — P., & Dence, J., 1732, May 12, Elevators.
 Keene, J. (Baudvin), 834, Mar. 8, Imitating silver.
 Keighley, C. W., & Netherwood, W., 3398, Oct. 20, Cut-ting corded fabrics.
 — J., & Dean, W., 657, Feb. 21, Raising beer, &c.
 Kellett, W. H. & Yates, T. E. & H., 1518, Apr. 26, Wire [cards.
 Kelley, G., & Senior, B., 3397, Oct. 20, Spinning.
 Kellogg, H. (Hughes), 855, Mar. 10, Fur coated fabrics.
 Kelshaw, H. M., 1592, May 2, Wire card covering.
 Kemp, G., 1177, Mar. 29, Artificial fuel.
 Kendall, G. & R., 1757, May 14, Economising fuel.
 — R. & G., 1757, May 14, Economising fuel.
 — W. J., 3568, Nov. 3, Umbrellas and parasols.
 Kennan, J. & T., & Eustace, M., 2230, June 27, Culti-vating green crops.
 — T. & J., & Eustace, M., 2230, June 27, Culti-vating green crops.
 Kennard, T. W., 1156, Mar. 28, Aquaria.
 Kennedy, M., 2030, June 7, Temple for looms.
 Kennelly, D. J., 2813, Aug. 26, Distilling, &c.
 — D. J., 3032, Sep. 16, Treating peat.
 Kennett, J., 1174, Mar. 29, Dress and attachments.
 — R., 3782, Nov. 20, Substitute for collodion.
 Kenyon, H., & Swindells, L., 2739, Aug. 19, Sulphate of [soda; chlorine; hydrochloric acid; cements.
 — H., & Swindells, L., 4013, Dec. 5, Nitrogen and [oxygen and their application.
 — J., 3928, Dec. 1, Economising fuel.
 — J. & J. H., & Taylor, W., 482, Feb. 10, Drying [yarns and fabrics.
 — J., Chantler, W., Hampson, H., & Hellewell, A., [1899, May 26, Heating hat brims.
 — J. H. & J., & Taylor, W., 482, Feb. 10, Drying [yarns and fabrics.
 — R. W., 3795, Nov. 21, Taps or cocks.
 Keohler, J. W., & Ferguson, D., 3388, Oct. 18, Cleansing [sharps or middlings.
 Ker, D., 2123, June 16, Preparing spirits, wines, &c.
 Kercado, G. T. de (Gedge), 104, Jan. 10, Water-meters.
 Kernal, J. (Wirth), 2494, July 19, Lubricators.
 Kershaw, H., 549, Feb. 14, Spinning.
 Kesterton, H., 53, Jan. 4, Rolled tubes, bars, &c.
 — H., 54, Jan. 4, Telegraph posts.
 — H., 253, Jan. 22, Steam-boilers.
 — H., 2497, July 19, Steam-boilers.
 Ketin, Galasse- (Newton), 3308, Oct. 11, Connecting [pipes.
 Kettle, B., 813, Mar. 6, Tenoning, rebating, and spout [cutting machines.
 Kidd, J., 1917, May 28, Air or vapour gas machines.
 Kidd, J. (Barff), 520, Feb. 12, Heating steam-boilers.
 Kidd, J. (Clough), 2017, June 6, Gas-burners.
 — J. (Hawes), 2097, June 13, Steam-traps.
 Kilner, J., & Friston, S. C., 1093, Mar. 25, Handles and [scales of knives, &c.
 Kimball, A., & Morton, J., 2227, June 27, Sewing-machines.

Kinder, F. (*Kinder*), 800, Mar. 5, Washing-machines.
Kinder, J. S. (*Kinder*), 800, Mar. 5, Washing-machines.
 King, F. J., 2574, July 29, Separating ores.
 — H. J. H., 2109, June 14, Feeding fibres to carding [machines, &c.]
 — J., J. M. & T. D. M., 467, Feb. 8, Railway platforms.
 — J., J. M. & T. D. M., 468, Feb. 8, Repairing propeller [shafts].
 — J. A., 116, Jan. 11, Peat-fuel.
 — J. M., T. D. M. & J., 467, Feb. 8, Railway platforms.
 — J. M., T. D. M. & J., 468, Feb. 8, Repairing propeller [shafts].
 — T. D. M., J. & J. M., 467, Feb. 8, Railway platforms.
 — T. D. M., J. & J. M., 468, Feb. 8, Repairing propeller [shafts].
 Kingan, S. (*Kingan*), 2063, June 11, Refrigerating.
Kingan, T. D. (*Kingan*), 2063, June 11, Refrigerating.
 Kingdon, T. B., 3598, Nov. 5, Grinding printers' inks, &c.
 Kingston, F., 3000, Sep. 12, Cricket bat handles.
 Kininmonth, J., 102, Jan. 10, Bakers' ovens.
 Kippax, J., 1721, May 12, Dobbies for looms.
 — J., 1722, May 15, Turkish towels, &c.
 Kirk, P., 1782, May 15, Stoves and fire-grates.
Kirk, S. W., & Griffith, W. R. (*Haseltine*), 2904, Sep. 3, [Separating, &c. metals from ores].
Kirkham, G. B. (*Newton*), 444, Feb. 6, Treadle motions.
 Kirkman, J., 200, Jan. 17, Governors.
 — J., 2636, Aug. 6, Lubricating packing.
Kister, & Damien (*Johnson*), 1890, Apr. 17, Pulleys and [blocks].
 Kitchin, M., 1479, Apr. 24, Leather.
Kiteon, G. L., & Carr, G. W. (*Johnson*), 521, Feb. 12, [Valves].
 — G. L., & Carr, G. W. (*Johnson*), 8059, Sep. 18, [Valves].
 Kleinan, H., & Marston, E. (*Teyssonniere*), 1670, May 8, [Ink and inkstands].
 Klotz, M. (*Bonneville*), 3991, Dec. 4, Sewing-machines.
 Klüh, S., 1473, Apr. 23, Printing colored devices upon [earthenware, &c.].
 Knab, D. C., 2482, July 19, Gas.
 Knaggs, W., 488, Feb. 10, Fire-places.
 Knevet, A., 438, Feb. 6, Domestic fire-grates.
Knight, E., & White, T. H. (*Haseltine*), 806, Mar. 5, [Lamps].
 Knight, G. B., 3532, Oct. 30, Fuel.
 — John, 3373, Oct. 18, Asphalte paving.
 — John H., 3797, Nov. 21, Steam digging machines.
 — Joseph, 234, Jan. 20, Umbrellas, parasols, &c.
 Knoblauch, C., 2752, Aug. 20, Furnace grates.
 Knott, R., 2442, July 15, Treating sewage.
Knous, J. (*Mills*), 2880, Sep. 2, Sewing-machines.
Knowles, C. B., & Saunders, J. E. (*Lake*), 719, Feb. 26, [Regulating blast of locomotives].
 Knowles, J., 1374, Apr. 16, Producing blast in furnaces.
 — M., & Barnes, D., 105, Jan. 10, Looms.
 — M., & Chalk, A., 1356, Apr. 15, Damping warp [in looms].
 Koch, P. P. E. M., 4083, Dec. 11, Preserving food.
 Kolb, A., & Allsop, C., 316, Jan. 27, Ventilating closets, &c.
 Konn, S. W. (*Lodighin*), 91, Jan. 8, Producing heat.
 Kops, C. M. de Bruyn, Martignoni, J., & Liernur, C. T., [1648, May 7, Screw-cutting gear].
Kornblum, M., & Goodrich, A. S. (*Newton*), 2977, Sep. 10, [Feed-water indicator].
 Körting, E., 626, Feb. 19, Steam-jet and air condensers.
Korwan, F., & Flursheim, M. (*Wirth*), 1611, May 5, [Self-lighting gas apparatus].
 — F., & Flursheim, M. (*Soul*), 3607, Nov. 6, Self-lighting gas apparatus.
Krause, H. F. (*Lake*), 944, Mar. 14, Veneers or tiles.
Krause, H. (*Lake*), 80, Jan. 8, Air-gas.

Kraut, K. (*Lunge*), 4212, Dec. 23, Scouring wool and [utilising products].
 Krauth, F. T., 1087, Mar. 24, Escapements for watches, &c.
Kreb, F., & Bauer, A. (*Fisk*), 1584, May 2, Printing [telegraphs].
Kresser, V. & De Merilens, A. (*Johnson*), 3937, Dec. 1, [Paper-pulp].
 Krieger, A., 1768, May 15, Breaks.
 Kruger, A., & Colani, T., 3949, Dec. 2, Saccharification [of grains].
 Kuhlmann, F., 847, Mar. 8, Utilising acid residues.
 Kunstaedter, J. J., & Hendrickx, P. J. A., 4198, Dec. 22, [Portable hoists].
 Künzli, W. (*Browne*), 3702, Nov. 14, Joining leather [straps, &c.].
 Kux, A., 422, Feb. 5, Steam-boilers.
 Kyle, J., 2410, July 12, Ice-making.

L

Laak, L. van, & Gillespie, J., 1062, Mar. 21, Bungs and [bung inserters].
Labarre, E. de, & Snoeck, A. (*Hughes*), 321, Jan. 27, [Thread].
 Lacassaigne, A. F., 4104, Dec. 13, Napping cloth.
Lacauve, H. C. de, & Gilquin, L. (*Mewburn*), 3339, [Oct. 15, Fire-escapes].
 Lacon, W. S., 186, Jan. 16, Lowering ships' boats.
 Lacroix, E. N., 1152, Mar. 27, Separating, &c. middlings.
 Lafargue, A., 458, Feb. 7, Oil-gas.
 — A., 3651, Nov. 8, Engine counters.
 La Grove, W. A. P., 2531, July 24, Mechanical toys.
 Laird, J., & Rutherford, W., 3508, Oct. 29, Weaving bags, [sacks, &c.].
 Lake, H. H., & Sedgwick, R., 1132, Mar. 27, Preventing [fraud by omnibus conductors, &c.].
 — J., 787, Mar. 5, Fire-places and furnaces.
 — W. R. (*Eaton & Hall*), 26, Jan. 2, Manufacturing [meal, &c.].
 — W. R. (*Small*), 27, Jan. 2, Cleaning horses.
 — W. R. (*Seeling*), 79, Jan. 8, Thread-spools.
 — W. R. (*Krause*), 80, Jan. 8, Air-gas.
 — W. R. (*Myers*), 127, Jan. 11, Stove and other [pipes, &c.].
 — W. R. (*Warner*), 225, Jan. 18, Fire-proof vaults.
 — W. R. (*Warner*), 226, Jan. 18, Fire-proof safes.
 — W. R. (*Blake*), 227, Jan. 18, Sewing-machines.
 — W. R. (*Smith*), 279, Jan. 23, Railway breaks.
 — W. R. (*Martin & Beath*), 290, Jan. 24, Making [ice; cooling liquids, &c.].
 — W. R. (*Corliss*), 300, Jan. 25, Clothes wringers.
 — W. R. (*Marquez*), 317, Jan. 27, Breakwaters.
 — W. R. (*Johnson*), 371, Jan. 30, Fire-alarm and [water supply apparatus].
 — W. R. (*Parkyn*), 396, Feb. 1, Treating middlings.
 — W. R. (*Garau, Ticozzi, & Co.*), 441, Feb. 6, Rail- [way breaks].
 — W. R. (*Blake*), 452, Feb. 7, Steam-engine valves.
 — W. R. (*Blake*), 454, Feb. 7, Steam-engine valves.
 — W. R. (*Shedd*), 473, Feb. 8, Heating steam-boilers.
 — W. R. (*Barton*), 540, Feb. 13, Sewing sails, &c.
 — W. R. (*Ritchell*), 558, Feb. 14, Drilling & boring.
 — W. R. (*Büttgenbach*), 560, Feb. 15, Blast furnaces.
 — W. R. (*Proudfoot*), 634, Feb. 20, Burning liquid [fuel].
 — W. R. (*Proudfoot*), 635, Feb. 20, Steam-boilers [and furnaces].

- Lake, W. R. (*Knowles & Saunders*), 719, Feb. 26, Regulating blast of locomotives.
- W. R. (*Wilson*), 727, Feb. 27, Roller-journal-boxes.
- W. R. (*Gardiner*), 757, Mar. 1, Railway carriage [springs].
- W. R. (*Beck*), 795, Mar. 5, Paper-cloth, &c.
- W. R. (*Mears*), 877, Mar. 11, Boots and shoes.
- W. R. (*West & Goodwin*), 933, Mar. 14, Rotary-pumps.
- W. R. (*Krause*), 944, Mar. 14, Veneers or tiles.
- W. R. (*Cochrane*), 1021, Mar. 19, Stay-bolts for [steam-boilers].
- W. R. (*Prall*), 1051, Mar. 20, Supplying locomotive tenders with water.
- W. R. (*Mountain*), 1223, Apr. 2, Life preserving [mattress].
- W. R. (*Mooney & Comstock*), 1283, Apr. 7, Sewing-machines.
- W. R. (*Coffee*), 1554, Apr. 29, Printing telegraphs.
- W. R. (*Carll & Cook*), 1688, May 9, Rotary-pumps.
- W. R. (*McDonald*), 1702, May 10, Moulds for oil-cakes.
- W. R. (*Drake*), 1714, May 10, Baling cotton.
- W. R. (*Allen*), 1737, May 13, Veneers.
- W. R. (*Brewer*), 1769, May 15, Axle-boxes.
- W. R. (*Sprague*), 1770, May 15, Traction-engines.
- W. R. (*Ashcraft*), 1783, May 15, Coffee.
- W. R. (*Whitney*), 1801, May 17, Band-saw machines.
- W. R. (*Blackman*), 1831, May 20, Wheels.
- W. R. (*Kavanagh*), 1859, May 22, Gas.
- W. R. (*Tucker*), 1860, May 22, Boots and shoes.
- W. R. (*Gordon*), 1883, May 24, Harvesters.
- W. R. (*Wells*), 1922, May 28, Generating vapour [from bi-sulphide of carbon].
- W. R. (*Brook*), 1930, May 28, Sewing-machines.
- W. R. (*Carter*), 1982, June 2, Ink.
- W. R. (*Flatley & Marson*), 1988, June 3, Collars [and clasps].
- W. R. (*Sedgwick*), 2049, June 9, Engraving and [chasing].
- W. R. (*Lavroff*), 2080, June 12, Casting copper, &c.
- W. R. (*Moran & Moran*), 2100, June 13, Horse-shoes.
- W. R. (*Jones & Cooley*), 2220, June 26, Preserving [meat, fruit, &c].
- W. R. (*McKean*), 2263, June 30, Drilling rocks, &c.
- W. R. (*Crossley*), 2292, July 2, Printing carpets.
- W. R. (*Crossley*), 2293, July 2, Carpets.
- W. R. (*Crossley*), 2294, July 2, Carpets.
- W. R. (*Brownell*), 2302, July 2, Plating metals.
- W. R. (*Boschan*), 2355, July 8, Spark-catchers.
- W. R. (*Zichermann*), 2357, July 8, Baking-ovens.
- W. R. (*Lorimer*), 2358, July 8, Printing yarn.
- W. R. (*Avery*), 2496, July 19, Spinning.
- W. R. (*Locke*), 2557, July 26, Drying-houses, &c.
- W. R. (*Pope*), 2656, Aug. 7, Railway signals.
- W. R. (*Harris*), 2675, Aug. 12, Stretching boots [and shoes].
- W. R. (*Hotchkiss*), 2698, Aug. 14, Wood pavement.
- W. R. (*Mühlig*), 2716, Aug. 16, Glass furnaces, &c.
- W. R. (*Parvin & Overman*), 2758, Aug. 20, Traction-engines.
- W. R. (*Squier & Squier*), 2767, Aug. 21, Hulling [rice, &c].
- W. R. (*Whidden, Reed, & Fletcher*), 2779, Aug. 21, [Production of light].
- W. R. (*Pope*), 2812, Aug. 26, Screw-threading [gas-fittings].
- W. R. (*Stevens & Gear*), 2828, Aug. 27, Weaving.
- W. R. (*Semple*), 2837, Aug. 28, Trimming books [and cutting paper].
- Lake, W. R. (*Gardiner*), 2851, Aug. 29, Railway carriage springs.
- W. R. (*Morrison*), 3012, Sep. 13, Brackets.
- W. R. (*Storer*), 3070, Sep. 18, Fertilising substances; preventing escape of odours.
- W. R. (*Morrell*), 3104, Sep. 22, Rolling metals.
- W. R. (*Tisdale*), 3117, Sep. 23, Peat-fuel.
- W. R. (*Mountain*), 3200, Oct. 2, Life preserving [mattress].
- W. R. (*Baxter*), 3343, Oct. 15, Pumps.
- W. R. (*Jobbins*), 3393, Oct. 20, Folding, &c. fabrics.
- W. R. (*Blake*), 3470, Oct. 25, Nails or tacks.
- W. R. (*Blake*), 3475, Oct. 25, Lasting boots & shoes.
- W. R. (*Rourke*), 3553, Nov. 1, Propelling boats, &c.
- W. R. (*McKay*), 3565, Nov. 1, Lasting boots & shoes.
- W. R. (*Moro & Moro*), 3597, Nov. 5, Compressing [peat].
- W. R. (*Fogarty*), 3848, Nov. 25, Gas-engines.
- W. R. (*McKean*), 3901, Nov. 28, Drilling rock, &c.
- W. R. (*Nobles & Gustin*), 3919, Nov. 29, Flash-light signals.
- W. R. (*Pepping*), 3978, Dec. 4, Welding iron & steel.
- W. R. (*Fitz-Patrick*), 4040, Dec. 8, Drawers or pants.
- W. R. (*Moorey*), 4089, Dec. 11, Preserved meat tins.
- W. R. (*Moncombe-Carly*), 4112, Dec. 13, Threshing-machines.
- W. R. (*Moride*), 4120, Dec. 15, Vessels for holding, [and explosive liquids].
- W. R. (*Ingram*), 4144, Dec. 17, Ventilating windows.
- W. R. (*Jordan*), 4208, Dec. 22, Bale-ties.
- W. R. (*Roudebush*), 4209, Dec. 22, Artificial butter, &c.
- W. R. (*Rhode Island Horse-shoe Co.*), 4210, [Dec. 23, Horse-shoes].
- W. R. (*Loche*), 4238, Dec. 24, Baking ovens.
- W. R. (*Rhode Island Horse-shoe Co.*), 4263, Dec. 29, [Rolling metals].
- Laloux, Dresse, & Co. (Henkel), 1080, Mar. 24, Fire-arms.
- Lamb, D. M. (Mills), 2126, June 17, Waterproof gum.
- Lamb, J., 1966, May 31, Heating feed-water; economising [fuel, &c].
- Lamb, J. G., & Potter, H. T. (Newton), 340, Jan. 28, [Spinning].
- Lamb, J. W., & Lowe, S., 73, Jan. 7, Knitting.
- J. W., & Roebuck, T., 2863, Aug. 30, Ventilators.
- W. A., 2467, July 17, Floating docks.
- Lambert, F., 4100, Dec. 12, Raising submarine cables.
- J. M., 2549, July 26, Leather hose, &c.
- Lancaster, G., & De La Rue, W. W., 639, Feb. 20, Scoring [games].
- J. R., 3922, Nov. 29, Combination tool.
- R., & Dean, W., 442, Feb. 6, Gas-regulators.
- R., & Swindells, L., 714, Feb. 26, Furnaces.
- W., 4037, Dec. 8, Transmitting speeds to shafts.
- Landau, M. I., 1131, Mar. 26, Lamps, furnaces, fire-places, &c.
- Lang, S., 892, Mar. 12, Domestic fire-grates.
- Lange, L., 3571, Nov. 3, Fire-bars.
- Langlands, G., & Johnston, J., 2160, June 20, Shuttles.
- Langley, J. B., 1616, May 5, Water-gauges.
- Lanham, J., 1662, May 8, Boots and shoes.
- J., 2958, Sep. 9, Boots and shoes.
- Lanier, G. P., (*Genesee*), 130, Jan. 13, Spring mattresses.
- Lanzarotti, A. G., 1703, May 10, Operating quadrature [of circle].
- Larché C. (Bonneville), 2258, June 30, Spinning.
- Large, J., 1409, Apr. 18, Railway carriages.
- Larkin, H., & White, W., 1302, Apr. 8, Iron and steel.
- Larret, L. Pagnelle, de (Gedge), 1907, May 27, Mowing [and reaping, &c].
- Lartigue, H., Prud'homme, P. D., & Tesse, P. (Clark), 490, Feb. 10, Railway signals.

- Lartigue, H. Forest, H., & Digney, J. D., & T. S. (Johnson)*,
[247, Jan. 21, Railway signals.
- La Rue, F. A. H. (Francis)*, 930, Mar. 14, Separating
[magnetic from non-magnetic substances.
- *F. A. H. (Francis)*, 1865, May 23, Treating
[copper pyrites, &c.
- Larue, J., 172, Jan. 16, Printing.
- La Rue, W. W. de*, 2571, July 29, Calendars.
- *W. W. de, & Lancaster, G.*, 639, Feb. 20, Scoring
[games.
- Laskarzewski, C. A. de, & Noyes, T. H., 1470, Apr. 23,
[Musical instruments.
- Lassoe, V. F., & Meyer, G. F. (Newton)*, 1995, June 3,
[Safety-valves.
- Latham, B. 331, Jan. 28, Manure.
- Laujorrais, P. I. (Gedge)*, 4195, Dec. 20, Producing colored
[designs on glass.
- Laurette, L. (Clark)*, 368, Jan. 30, Artificial stone.
- Lauth, B. C. (Williams)*, 3947, Dec. 2, Rolling metals.
- Lavater, M. L. J. (Mather)*, 4017, Dec. 6, Filtering.
- Laverack, G. E.*, 2241, June 28, Fastening, &c. railway
[carriage doors.
- Laviarde, A. (Smith)*, 2501, July 21, Wire-cards.
- Lavillasse, de, & Collet (Henry)*, 650, Feb. 20, Treating
[marine plants.
- Lavillasse, P. de & Collet, A.*, 4135, Dec. 16, Incinerating
[sea-weed, &c.
- *P. de, Testud de Beauregard, F. A. & Collet, A.*,
[4166, Dec. 18, Treating sea-weed, &c.
- Lavroff, A. S. (Lake)*, 2080, June 12, Casting copper, &c.
- Law, J. & S.*, 71, Jan. 7, Wire-cards and wire for same.
- *S. & J.*, 71, Jan. 7, Wire-cards and wire for same.
- Lawrence, C. (Lawrence)*, 510, Feb. 12, Washing clothes, &c.
- Lawrence, F. L. (Lawrence)*, 510, Feb. 12, Washing
[clothes, &c.
- *W.*, 1083, Mar. 24, Cooling, &c. liquids; con-
[densing vapors.
- Lawrie, J. G., 1092, Mar. 25, Docking ships.
- Lawson, S., 1102, Mar. 25, Axles and axle-boxes.
- Lawton, A., & Gordon, H. H. (Johnson)*, 2059, June 10,
[Moving and raising coal, &c.
- Lawton, H. C., 859, Mar. 10, Fire-places and flues.
- Laycock, T., & Shuttleworth, J.*, 1078, Mar. 24, Sewing-
[machine spools, &c.
- Lea, F., & Hodgson, W.*, 3895, Nov. 28, Spinning & twisting.
- *J. W.*, 1031, Mar. 20, Shirts, &c.
- *W.*, 566, Feb. 15, Roller-blind movements.
- Leach, G.*, 357, Jan. 29, Preparing and carding wool.
- *G.*, 358, Jan. 29, Sea-fishing.
- *G.*, 359, Jan. 29, Preparing wool.
- *G.*, 1281, Apr. 7, Winding gear.
- *J.*, 4223, Dec. 23, Carding fibrous materials.
- Leatham, W., 30, Jan. 2, Valves.
- Le Cerf (Petremant)*, 3701, Nov. 14, Dress improvers.
- Léchaudée, C.*, 4132, Dec. 16, Life-preserving jackets.
- Lécaur, E. J. J., & Pinel, M. P. A. (Henry)*, 651, Feb. 20,
[Preparing fibres for spinning.
- Leconte & Sons (Henderson)*, 2946, Sep. 8, Sewing-ma-
[chines.
- Lee, A., 3468, Oct. 25, Grinding saws.
- *E. P., & Billups, J. E.*, 1341, Apr. 12, Photographic
[pictures.
- *E. P., & Billups, J. E.*, 1449, Apr. 22, Producing
[photographic pictures on porcelain, &c.
- *G. S.*, 3670, Nov. 11, Balls and mallets for games.
- Lee, H. (Haseltine)*, 2287, July 2, Reaping and mowing.
- Lee, H. M.*, 493, Feb. 11, Preserving ferns, plants, and
[grasses.
- *H. N.*, 1870, May 23, Convertible camp-bedstead.
- *J.*, 3891, Nov. 28, Street bins.
- *J. A.*, 695, Feb. 24, Boiling fibres for paper; treat-
[ing waste leys.
- Lee, J. H., & Pringle, C.*, 594, Feb. 18, Steam-boilers and
[engines.
- *J. W.*, 1829, May 20, Traction-engines and boilers.
- *R.*, 2370, July 9, Boilers for horticultural use, &c.
- *R. B., & Rogers, S. A.*, 190, Jan. 17, Telegraph posts,
[pillars, &c.
- Leech, W. (Malpas)*, 2567, July 29, Preserving wood.
- Leeming, J.*, 693, Feb. 24, Pickers for looms.
- *T., Ray, R., & Lynde, F. G.*, 46, Jan. 4, Bronzing
[and coloring paper, &c.
- Lees, S. L., & Faulkner, F.*, 1612, May 5, Agitating ap-
[paratus for breweries, &c.
- *T., & Ward, G. B.*, 2408, July 12, Curling hat brims.
- Lefebvre, C. (Wise)*, 1928, May 28, Sowing potatoes.
- Lefèvre, H., & Luton, E. A. (Imray)*, 1724, May 12, Chalk-
[fuel.
- Leffler, C. J. L.*, 2590, July 31, Rolling metals.
- Leggett, G.*, 2906, Sep. 4, School desks.
- Leigh, E.*, 3874, Nov. 27, Artificial fuel.
- *E. A.*, 738, Feb. 28, Carding-engines.
- *J.*, 2071, June 11, Treating sewage.
- *J.*, 2638, Aug. 6, Manure.
- *J.*, 3678, Nov. 12, Furnaces and feeding same.
- *J. S. (Bunster)*, 15, Jan. 1, Transporting and car-
[rying weights, &c.
- Lely, A.*, 3072, Sep. 18, Drilling and shaping machines.
- Lemaire, Bailleux, —, & Co. (Johnson)*, 4221, Dec. 23,
[Treating fibres.
- Lemerre, L. J. D., & Vu, L. F. (Newton)*, 2134, June 17,
[Railway couplings.
- Le Moussu, B. C., & Moore, G.*, 2474, July 18, Engraving.
- Lendall, J.*, 3770, Nov. 20, Garden frames, lights, &c.
- Lenahan, M., & McDonald, L.*, 1113, Mar. 26, Harrow-
[ing and rolling; sowing seeds.
- Leon, W. F., Stebins, T., Rosenfield, A., & Mayers, H.*,
[2057, June 10, Hydraulic hoists.
- Lerina, P.*, 1444, Apr. 21, Teaching writing.
- Leslie, J. B.*, 2038, June 9, Indicating direction of ocean
[currents.
- *J. B.*, 3352, Oct. 16, Indicating direction of ocean
[currents.
- Lesourd, O., & Guerot, H. (Freret)*, 2956, Sep. 9, Electric-
[batteries.
- Letang & Brissard (Johnson)*, 3711, Nov. 14, Printing.
- Letchford, R. M.*, 1335, Apr. 10, Night-lights.
- Leveaux, E. H.*, 2841, Aug. 28, Connecting railways.
- *E. H.*, 3123, Sep. 24, Driving carriages on tram-
[ways, &c.
- Lever, R. (Haddan)*, 1630, May 6, Saltpetre.
- Levi, P. H.*, 1962, May 31, Spring joint for scarf rings, &c.
- Levy, G. S. (Clark)*, 433, Feb. 5, Lining straw-board, &c.
- Lewis, C. W. (Bousfield)*, 1448, Apr. 21, Shaping and
[polishing stone, &c.
- Lewis, D., Briggs, J., & Willan, R.*, 494, Feb. 11, Sizing
[and dressing machines.
- *H.*, 322, Jan. 27, Boots and shoes.
- *James*, 575, Feb. 15, Fire-grates and cooking bak-
[ing, &c.
- *John*, 1750, May 14, Washing-machines.
- *Joshua*, 2587, July 30, Cleaning boots and shoes.
- *S. S.*, 1780, May 15, Hardening, &c. metals.
- *S. S.*, 3721, Nov. 15, Hardening, &c. metals.
- *S. S., & Hawkins, G. L.*, 1543, Apr. 28, Cleaning
[cotton waste, &c.
- Lichtenfelder, G. (Clark)*, 2620, Aug. 2, Chairs or seats.
- Liddon, J. J., & Casey, T. H.*, 3130, Sep. 25, Compasses.
- Lidgerwood, W. van V. (Haseltine)*, 3344, Oct. 15, Rotary-
[engines.
- Liebert, J.*, 701, Feb. 25, Substitute for coffee.
- *J.*, 1162, Mar. 28, Treating acorns, &c.
- *J.*, 3139, Sep. 26, Treating acorns, &c.
- Liernur, C. T.*, 3168, Sep. 30, Pneumatic drainage works.

- Liernur, C. T., De Bruyn Kops, C. M., & Martignoni, J.,
 [1648, May 7, Screw-cutting gear.
 Lightbody, W. M., 698, Feb. 23, Breaks.
 Lightowler, Jonathan, & Best, J. R., 617, Feb. 19, Kitchen-
 [ranges.
 — Joseph, & Barraclough, C., 1841, May 21, Looms.
 Lightwood, W., 3105, Sep. 22, Cartridges.
 Lilley, G. C., 2609, Aug. 1, Cocks or taps.
 Lilly, W. E., 2952, Sep. 8, Boxes for holding reels.
 Lindemann, C. A. H., 3871, Nov. 27, Antiseptic.
 Lindsay, J. (Haseltine), 4113, Dec. 13, Implements for
 [cutting, gripping, &c.
 Liotard, C. L., 2491, July 19, Gas-burners.
 Lish, J. J., 1621, May 5, Building with concrete.
 Lissagaray, H. P., & Durruthy, L. O., 809, Mar. 6, Blood-
 manure.
 Lister, A., & Robinson, T., 3218, Oct. 4, Shuttles.
 — R., 1140, Mar. 27, Screw-propellers.
 — S. C., 2508, July 22, Combustion of fuel.
 — S. C., 3838, Nov. 25, Combing waste silk.
 — T., & Wharton, A., 688, Feb. 24, Raising liquids.
 Little, C. J., 3635, Nov. 8, Ordnance and projectiles.
 — F. B., 1992, June 3, Watering pots.
 — G., & Eastwood, T. C., 839, Mar. 8, Combing-ma-
 [chinery.
 — G., 2133, June 17, Automatic telegraphs.
 Littmann, F. (Morgan-Brown), 793, Mar. 5, Ice-making.
 Livesey, G. T., 2016, June 6, Gas.
 Livingstone, A. S., 4218, Dec. 23, Artificial fuel.
 Livsey, P. J. (Hall), 2625, Aug. 5, Dovetail joints.
 Jewell, W. H., 1669, May 8, Cleansing metallic plates.
 Lloyd, A. (White), 3310, Oct. 11, Cleansing and bleaching
 [fabrics, fibres, paintwork, &c.
 Lloyd, F., 3925, Dec. 1, Fire-grates.
 — N., 2265, June 30, Heating steam-boilers.
 — N., 4235, Dec. 24, Heating steam-boilers.
 Lloyd, R. (Haseltine), 2311, July 3, Distilling, &c. tur-
 [pentine; bleaching resin.
 — R. (Haseltine), 2761, Aug. 20, Solvents.
 Lloyd, W., 1480, Apr. 24, Consuming coal in fire-grates.
 Lobdell, G. G. (Johnson), 2061, June 10, Casting metals.
 — G. G. (Johnson), 2750, Aug. 20, Steam-engines.
 Locke, J. A. (Lake), 2557, July 26, Drying-houses, &c.
 — J. A. (Lake), 4238, Dec. 24, Baking-ovens.
 Lockwood, T., & Chappell, A., 4024, Dec. 6, Looms.
 — W., 2051, June 10, Converting iron.
 — W., & Foster, D., 1606, May 3, Moulds.
 Lodighin, A. N. (Konn), 91, Jan. 8, Producing heat.
 Loevis, W. von (Abel), 1938, May 29, Breaking and
 [scutching fibres.
 Logan, A. W. A., 4273, Dec. 30, Cleaning pipes or tubes.
 Loiseau, E. F. (Clark), 3419, Oct. 21, Artificial fuel.
 — O. (Imray), 1623, May 5, Smelting zinc.
 Lomax, H., Bradbury, G. F., Chadwick, T., & Singleton,
 [T., 1823, May 20, Sewing-machines.
 — H., Bradbury, G. F., Chadwick, T., & Singleton,
 [T., 3499, Oct. 28, Sewing-machines.
 Long, J., Forsyth, A., & Griffiths, J. R., 776, Mar. 4,
 [Photographic portraits.
 — R., 3196, Oct. 2, Picture-frames.
 — S., 2633, Aug. 6, Ships' boats.
 Longworth, T., & Jones, F. L., 298, Jan. 25, Looms.
 Loomes, E., 3300, Oct. 11, Boxes for matches, &c.
 Loomis, K. H., 3342, Oct. 15, Washer for screw-bolt
 [nuts, &c.
 Loo-Wauters, F. van (Hughes), 63, Jan. 6, Towing canal
 [boats.
 Lord, E., 2541, July 25, Grinding and pulverising.
 — J., 4269, Dec. 30, Utilising waste heat from coke
 [ovens.
 Lorie, C. E. de, 2902, Sep. 3, Transmitting &c. motive-
 [power.
 Lorimer, J. H. (Lake), 2358, July 8, Printing yarn.
 Loryea, A. M. (Newton), 2349, July 7, Sewing books.
 Loryea, A. M., Backus, O. J., & Sawyer, A. F., 217,
 [Jan. 18, Motive-power.
 Lott, J., 1605, May 3, Trimming edges of straps, &c.
 Louttit, K. Mc L. P., 2174, June 21, Gas.
 Love, W., & Harris, P. & R., 1546, Apr. 29, Regulating
 speed of marine-engines.
 Loveridge, T., 850, Mar. 10, Carding buttons.
 Lovibond, V. L., 1844, May 21, Consuming smoke.
 Lowe, O., 36, Jan. 3, Steam-boilers.
 — S., & Lamb, J. W., 73, Jan. 7, Knitting.
 — W., 2717, Aug. 16, Expansion and reversing gear.
 Lowman, H. L. (Newton), 1153, Mar. 27, Picks, adzes,
 [shovels, &c.
 Lowry, G., 2864, Aug. 30, Drilling, boring, &c.
 — G., & Gibson, J. H., 3261, Oct. 8, Heckling flax.
 Lucas, J., & Nichols, W., 2732, Aug. 18, Cutting coal.
 Luck, W., 3421, Oct. 22, Graphoscopes.
 Lucop, C., 3062, Sep. 18, Ship-building.
 Ludeke, J. E. F., 1806, May 19, Motive-power.
 — J. E. F., 2892, Sep. 3, Drawing and measuring
 [instrument.
 Lufbery, G. F. (Tongue), 973, Mar. 17, Stop-motions.
 Lake, R., 2268, June 30, Locking railway switches.
 — S. A., 1771, May 15, Fuel.
 Lund, G., 840, Mar. 8, Umbrella coverings.
 Lundquist, E., Rutherford, J., & Peer, J. A., 3847, Nov. 25,
 [Concentrators; separating substances.
 Lundy, J. J., 3108, Sep. 23, Lubricating compounds.
 Lange, G. (Kraut), 4212, Dec. 23, Scouring wool and
 [utilizing products.
 Lungo, U. de (Tardani), 3633, Nov. 7, Soap.
 Lurmann, F. W., & Aldendorff, C. (Vaughan), 2481,
 [July 19, Tapers.
 Lush, E. (Hughes), 2383, July 10, Woollen fabrics.
 Luton E. A., & Lefevre, H. (Imray), 1724, May 12, Chalk-
 [fuel.
 Lutschauig, A., & Ricketts, J., 1895, May 26, Obtaining
 [high temperatures.
 Lutwyche, W., 3810, Nov. 22, Stoves.
 Luxton, C. (Clark), 999, Mar. 18, Peat-machines.
 Lynch, T. F., 2458, July 16, Feeding-bottles.
 — T. F., 3631, Nov. 7, Folding papers for powders.
 Lynde, F. G., Leeming, T., & Ray, R., 46, Jan. 4, Bron-
 [zing and coloring paper, &c.
 Lyne, T., 380, Jan. 31, Moulding bricks.
 Lyon, H., & Robinson, E., 1529, Apr. 28, Indicating
 [contents of gasometers, &c.; and warning of rise
 [and fall of waters.
 — R., 523, Feb. 12, Railway communicating apparatus.
 Lyster, J. L., 2702, Aug. 15, Jugs.
 Lyte, F. M., & Weil, F., 3136, Sep. 25, Coating iron &
 [steel; coppering iron ships.
 Lyttle, W. A., 52, Jan. 4, Roofs, floors, &c.
 — W. A., 158, Jan. 15, Railways.
 — W. A., 791, Mar. 5, Tramways and cars.
 — W. A., 956, Mar. 15, Railways.
 — W. A., 1484, Apr. 21, Preserving timber.
 — W. A., 3312, Oct. 11, Candles.
 — W. A., 3769, Nov. 20, Wood-pavements.
 — W. A., 3826, Nov. 24, Fuel.
 — W. A., 4131, Dec. 16, Fuel.

M.

- Maardt, J. G., & Erichsen, J. (Jensen), 602, Feb. 18,
 [Coke ovens, &c.
 — J. G., & Erichsen, E. J. (Jensen), 1073, Mar. 22,
 [Coke ovens, &c.

- Maass, F., & Flos, A., 3389, Oct. 18, Lubricative packing.
 Mabile, P. F. (Smith), 804, Mar. 5, Kilns.
 Mabson, J., 2211, June 25, Drawing corks.
 Macaulay, H., 92, Jan. 8, Fire-arms.
 McAvoy, H. L., 2152, June 19, Carburetting air.
 McBride, T., 579, Feb. 15, Gold and silver cord.
 McCarter, J. W., 3214, Oct. 4, Condensing steam.
 McCarty, B. F., Olds, P. F., & Mason, F. H. (Hasel-
 [tine], 681, Feb. 22, Economising fuel.
 McClean, F., 41, Jan. 3, Raising ships.
 McClure, W. B., Graham, J. C., & Claughton, H. O.
 [(Haseltine), 13, Jan. 1, Back chain for
 [cart saddles.
 McComb, J. J. (Johnsen), 1835, May 20, Connecting
 [metallic bands, &c.
 MacCunn, J., 801, Mar. 5, Steering indicators for ships.
 Macdermott, M., 679, Feb. 22, Perforating rock, coal, &c.
 McDonald, L., Lenehan, M., 1113, Mar. 26, Harrowing,
 [rolling; sowing seeds.
 McDonald, R. (Lake), 1702, May 10, Moulds for oil-cakes.
 McDonald, T., 1139, Mar. 27, Seed-crushing.
 Macdonell, E. L., 2423, July 14, Diminishing effects of
 [railway collisions.
 McDonnell, C. & W., 3233, Oct. 6, Purifying, &c. butter.
 — W. & C., 3233, Oct. 6, Purifying, &c. butter.
 McDougall, A., 542, Feb. 13, Treating stable manure.
 — J., 393, Feb. 1, Manure.
 McDowall, W., & Billingham, F., 1492, Apr. 24, Washing
 [and wringing fabrics.
 McDowell, D., 4008, Dec. 5, Churns.
 McElroy, J., 1100, Mar. 25, Slide-valves.
 McEvoy, C. A., 740, Feb. 28, Electric fuses.
 — C. A., 1586, May 2, Firing fuses.
 McEwen, W., 915, Mar. 13, Disintegrating meat.
 McFarlane, A., 3844, Nov. 25, Chairs.
 — T. D., 4251, Dec. 27, Washing and wringing.
 McFethries, J. (Wise), 725, Feb. 27, Cutting screw threads.
 MacGeorge, W., & McKay, J., 1365, Apr. 16, Producing
 [blast for smithy fires, &c.
 McGiffert, W., & Birch, R. (Birch), 3390, Oct. 20, Stove
 [polish.
 McGlashan, J., 3465, Oct. 25, Softening fibrous substances.
 McGregor, A. & R., Minister, R. H., & Winters, V. (Clark),
 [4047, Dec. 8, Hulling maize.
 McGregor, J., 2939, Sep. 6, Glazing and polishing saws.
 Macgregor, P. C., 3853, Nov. 26, Treating & dyeing yarns.
 McGregor, R. & A., Minister, R. H., & Winters, V. (Clark),
 [4047, Dec. 8, Hulling maize.
 McGrigor, A. B. (Robertson), 2147, June 19, Hydraulic
 [cements.
 McIlwham, J., Robertson, W., Orchar, J. G., & Muir, M. A.,
 [3427, Oct. 22, Winding yarns.
 Macintosh, J., 1345, Apr. 12, Preventing ships sinking;
 [raising sunken vessels, &c.
 — J., 2195, June 24, Tobacco pouches.
 — J., 2844, Aug. 29, Waterproofing textile fabrics.
 McIntyre, P., 424, Feb. 5, Sharpening chisels, &c.
 McKaig, W. R., & Stitt, J. C., 1146, Mar. 27, Floating baths.
 Mackay, D., 2894, Sep. 3, Omphalic blisters.
 — G., 3129, Sep. 25, Recovering oils, &c. from
 [fabrics or raw materials.
 McKay, G. (Dodge), 865, Mar. 11, Hose-pipes.
 — G. (Lake), 3565, Nov. 1, Lasting boots & shoes.
 Mackay, G., & Fowler, J., 1388, Apr. 17, Carriages and
 [wagons.
 McKay, J., & MacGeorge, W., 1365, Apr. 16, Producing
 [blast for smithy fires, &c.
 Mackay, M., 2513, July 23, Composition for casks.
 McKean, J. A. (Lake), 2263, June 30, Drilling rock, &c.
 — J. A. (Lake), 3901, Nov. 28, Drilling rock, &c.
 McKee, J. A., 2530, July 24, Cruet glasses.
 McKeever, S. (Newton), 2348, July 7, Cartridge-boxes.
 Mackenzie, G. N., Morris, G. W., & Robinson, J. S.
 [(Benson), 3697, Nov. 13, Oil-gas.
 Mackenzie, J., Williams, E. P., & Strode, W. W. (Haskins),
 [4192, Dec. 20, Gas-stoves.
 MacKenzie, J. D., & Rahles, F., 2562, July 28, Bells.
 Mackenzie, W., & Macrone, W., 2390, July 11, Stereo-
 [type plates.
 Mackie, A., 3852, Nov. 26, Type-composing machinery.
 — R., 1463, Apr. 23, Caps or bonnets.
 — S. J., 445, Feb. 6, Explosive compounds.
 — S. J., & Faure, C. A., 1830, May 20, Explosive
 [compounds.
 — S. J., & Faure, C. A., 3832, Nov. 24, Explosive
 [compounds.
 Mackinnon, H. (Bousfield), 2235, June 27, Lamps.
 Mackintire, J., 4287, Dec. 31, Casting metals.
 McKnight, J., & Dobson, G., 3128, Sep. 25, Cropping
 [knitted bonnets.
 MacLachlan, J., 751, Mar. 1, Fire-places.
 MacLean, W., 2933, Sep. 6, Printing on textile fabrics.
 McLeish, A., 1323, Apr. 10, Mechanical hammers.
 McMillan, D., 3600, Nov. 5, Feed for carding-engines.
 McNabb, W., 1494, Apr. 24, Baling cotton, &c.
 — W., 3415, Oct. 21, Securing bale-bands.
 Macneill, Sir J., 206, Jan. 18, Tramways and carriages.
 — R., 184, Jan. 16, Pavements.
 Macomber, D. O., 2475, July 18, Rendering wood unin-
 [flammable.
 Macphail, N., 2931, Sep. 6, Registering, &c. apparatus
 [for tramway cars.
 McPhee, D., & Hailstone, R. W., 1817, May 20, Ship's
 [telegraph and indicator.
 Macrone, W., & Mackenzie, W., 2390, July 11, Stereo-
 [type plates.
 McSherry, M., & Nisbet, A., 4035, Dec. 8, Fire-places.
 McSkimming, J., 1564, Apr. 30, Umbrellas, sunshades, &c.
 McVoy, J. R., 3921, Nov. 29, Cleaning boots, plate, &c.
 McWilliams, A. S., 2005, June 5, Sheep-shears.
 Maddison, H., & Ord, J. R., 3249, Oct. 7, Stone-breakers.
 Madsen, C. L., 4167, Dec. 18, Telegraph cables, insula-
 [ting conductors.
 Maguire, W. R., 1701, May 10, Water-filters.
 Maher, A. J., 1232, Apr. 3, Hooking and unhooking
 [horses from tramway carriages, &c.
 — A. J., 1588, May 2, Axle-bearings.
 — A. J., & Black, W., 1668, May 8, Transferring
 [rolling stock on tramways, &c.
 Maignan, L., & Franck, J., 1561, Apr. 30, Stopping
 [bottles, &c.
 Main, E. W., 2544, July 22, Sanitary safety-valves.
 Maitland, W. H. (Hoffman), 2834, Aug. 28, Gas.
 Maitre, E. (Bonneville), 2010, June 5, Covering surfaces
 [with wood.
 Malcolm, G., 1401, Apr. 18, Printing ornamental fabrics.
 Maleham, C. H., & Mirfin, T., 940, Mar. 14, Fire-arms.
 Malhère, E., 2121, June 16, Lace-making.
 Mallam, B., 3244, Oct. 6, Carriage door handles.
 Mallison, J., 3993, Dec. 4, Bleaching, mordanting, &c. yarn.
 Mallory, G. W., 1642, May 7, Operating boats on ship-
 [board.
 Malo, L., & Robin, T. (Johnson), 3275, Oct. 9, Asphalte
 [pavements.
 Malone, T. S., 3811, Nov. 22, Combined seat and stool.
 Malortie, C. Baron de, & Woods, J. T., 1006, Mar. 19,
 [Furnaces.
 Malpas, W. (Leech), 2567, July 29, Preserving wood.
 Mamelzer, T., & Hannart, L. (Clark), 397, Feb. 1,
 [Ticketing shop goods, &c.
 Manbré, A., & Allibon, G., 2, Jan. 1, Safety-valves.
 — A., & Allibon, G., 3908, Nov. 29, Safety-valves.
 Mann, W. D' A., 1309, Apr. 9, Railway carriages and
 [fittings.

- Manning, R. H., 3952, Dec. 2, Railway breaks.
 Mannini, D., 1530, Apr. 28, Treating genista for making [canvas, ropes, &c.
 Manock, E. & J., 2125, June 17, Reducing and screening [artificial manures, &c.
 — J. & E., 2125, June 17, Reducing and screening [artificial manures, &c.
 Mansbridge, T., 2219, June 26, Locks.
 Manwaring, W., & Pidgeon, D., 2203, June 24, Reaping-machines.
 — W., & Pidgeon, D., 2387, July 10, Harvesting-machines.
 Manwell, J., 3314, Oct. 13, Charging horizontal retorts.
 Maples, J. R., 3758, Nov. 19, Tramway cars.
 Mapleson, J. H., 858, Mar. 10, Tents.
 Mapplebeck, E., 2216, June 25, Copper tubes and copper [ended tubes.
 Maquay, S. W., 450, Feb. 7, Gas-retorts.
 — S. W., 511, Feb. 12, Manure.
 Marble, E., Pitts, J., & Aldrich, R. (Johnson), 2932, [Sep. 6, Cutting flock.
 — J. (Clark), 1557, Apr. 29, Indigo-blue dye.
 Marchand, I. F. Brunel, & Brunel-Bodin, L. (Gedge), [375, Jan. 31, Blocking boots.
 Margueritte, L. J. F. (Clark), 682, Feb. 22, Purifying [syrups, &c.
 — L. J. F. (Clark), 2413, July 12, Sugar.
 Marix-Picard, E., 4094, Dec. 12, Cravats.
 Markham, R. J., 345, Jan. 29, Wheels.
 — R. J., 2589, July 30, Wheels.
 Marley, J., & Thompson, R., 2055, June 10, Coke oven flues.
 Marlin, V., 3825, Nov. 24, Applying down & plumage of birds.
 Marquez, P. (Lake), 317, Jan. 27, Breakwaters.
 Marrian, W., 1929, May 28, Metallic furniture.
 Marsden, E., 3018, Sep. 15, Pans for boiling down, &c. [liquids.
 — E., 3574, Nov. 3, Communicating in trains.
 — J., & Collins, J., 2317, July 4, Manure.
 — W., Chesterman, J. & W., Guy, C., & Harling, [J., 818, Mar. 6, Spinning.
 Marshall, C., J. & H. D., 601, Feb. 18, Thrashing-machines.
 — H., 1189, Mar. 31, Buckles.
 — H. D., C. & J., 601, Feb. 18, Thrashing-machines.
 — J., H. D. & C., 601, Feb. 18, Thrashing-machines.
 — W., Adams, S., & Hickinbotham, F., 3206, Oct. 3, [Fastenings for doors of railway wagons.
 Marshall, W. M. (Woerteler), 3152, Sep. 27, Reflectors [and shades.
 Marsland, E., 592, Feb. 18, Land rollers.
 Marson, J., & Flatley, A. (Lake), 1988, June 3, Collars [and clasps.
 Marsters, S., 536, Feb. 13, Cooling beer and other liquids.
 — S., 737, Feb. 27, Cooling beer and other liquids.
 Marston, E., & Kleinau, H. (Teysonniere), 1670, May 8, [Ink and inkstands.
 Martignoni, J., Liernur, C. T., & De Bruyn Kops, C. M., [1648, May 7, Screw-cutting gear.
 Martin, Abraham, 2704, Aug. 15, Ornamenting wood, &c.
 — Alfred, & Sale, H. B., 3893, Nov. 28, Marking or [stamping paper, &c.
 Martin, B. G. (Bonneville), 486, Feb. 10, Presses.
 — B. G. (Bonneville), 1148, Mar. 27, Presses.
 — C. (Bonneville), 174, Jan. 16, Spinning.
 Martin, H., 1070, Mar. 22, Concrete, bricks, tiles, &c.
 — J., 3444, Oct. 23, Ships' propellers.
 — J. C., 3751, Nov. 19, Paper-pulp.
 — J. J., 3494, Oct. 28, Hanging and cutting up pigs.
 — J. R., 1953, May 10, Packing for rotatory en- [gines, &c.
 — J. T., 3251, Oct. 7, Cutting corks.
 — J. W., 2990, Sep. 11, Pistons.
 — J. W., 3077, Sep. 19, Tube expander and stopper.
 Martin, L. J. (Clark), 3353, Oct. 16, Artificial fuel; gas.
 Martin, M., 2776, Aug. 21, Balloons.
 Martin, P. E. (Smith), 1397, Apr. 17, Iron and steel.
 Martin, R., & Clark, W., 1696, May 10, Clipping animals.
 — R. E. R. & W. G., 642, Feb. 20, Artificial fuel.
 — S., 697, Feb. 25, Moulds for casting ingots.
 Martin, S. B., & Beath, J. M. (Lake), 290, Jan. 24, Mak- [ing ice, cooling liquids, &c.
 Martin, W. G. & R. E. R., 642, Feb. 20, Artificial fuel.
 — W. J., 3642, Nov. 8, School seats and desks.
 Marval, H. C. (Berdan), 398, Feb. 3, Fire-arms.
 — H. C. (Berdan), 413, Feb. 4, Fire-arms.
 Marvelle, L. J. C., & Du Chastaignt, N. (Tongue), 2668, [Aug. 9, Seats, &c. for advertising.
 Mason, A. W., 3220, Oct. 4, Producing optical illusions.
 — C., & Briggs, T. D., 3836, Nov. 24, Treating hides [and skins.
 Mason, F. H., McCarty, B. F., & Olds, P. F. (Haseltine), 681, [Feb. 22, Economising fuel.
 Mason, S., & Alcock, M., 2997, Sep. 12, Kiers for bleach- [ing, &c.
 Masourine, M. S., 207, Jan. 18, Caissons.
 Masse, I., & Noury, A. (Barlow), 2771, Aug. 21, Peat-fuel.
 Massey, B., & Hill, J., 3313, Oct. 13, Steam-boilers.
 Massingham, W., & Metcalfe, T. A., 3329, Oct. 15, Manure.
 Masson, J. B. F. (Johnson), 406, Feb. 3, Tin-foil.
 Mathelin, P. L., & Deplechin, J. B. (Mewburn), 409, Feb. 4, [Cocks.
 Mather, W., 878, Mar. 11, Steam drying cylinders.
 — W. (Lavater), 4017, Dec. 6, Filtering.
 Mathers, R., 2081, June 12, Driving drums and strap [pulleys.
 Mathews, F. C., & Southwood, W., 4002, Dec. 5, Pro- [pelling ships.
 — M., 2428, July 14, Watermarking paper.
 — T., 2753, Aug. 20, Woven fabrics.
 Mathieson, J., 2588, July 30, Torpedoes.
 Mathis, G., 867, Mar. 11, Sculpture copying apparatus.
 — G., 1502, Apr. 25, Sculpture copying apparatus.
 Matterson, H., 3469, Oct. 25, Ventilating fire-ranges.
 Matthews, C., & Hale, E., 264, Jan. 23, Rolling metals.
 — J., 947, Mar. 15, Straw elevators.
 — W. J., & Scott, W., 138, Jan. 13, Fire-arms.
 Matthey, P. (Mendez), 1977, May 31, Fitting ships for [carrying cattle.
 Maude, J., 1909, May 27, Chaff-cutting machines.
 Mauger, V. E. (Newton), 3448, Oct. 23, Cutting and [arranging cards.
 Maurel, H. S., 1800, May 17, Ruling paper.
 Maurer, W., & Schenck, E. (Bonneville), 914, Mar. 13, [Governors.
 — W., & Schenck, E. (Bonneville), 2966, Sep. 10, [Governors.
 Maurissen, H. (Newton), 2200, June 24, Bits for horses.
 Maxfield, John & J., 1926, May 28, Tea-pots, &c.
 — Joshua & J., 1926, May 28, Tea-pots, &c.
 Maxted, T., 1115, Mar. 26, Fuel.
 Maxwell, J., 4084, Dec. 11, Door locks.
 Maxwell, J. R., & Cope, E. (Benson), 1387, Apr. 17, [Steam pumping machinery.
 May, W., 2417, July 14, Metal boxes or cases.
 Maybery, J., 1236, Apr. 3, Tin-plates or black-plates.
 Mayer, J., 2371, July 9, Thermometrical apparatus.
 — J., & Villiers, P., 2751, Aug. 20, Impregnating air.
 Mayers, H., Leon, W. F., Stebins, T., & Rosenfield, A., [2057, June 10, Hydraulic hoists.
 Mayes, W. J., 838, Mar. 8, Furnace bars.
 Mayor, E. J., & Canning Sir S., 2554, July 26, Pneumatic [telegraphs.
 Mazon, J. (Johnson), 3698, Nov. 13, Spoons, forks, &c.
 Meakin, G. F. L., 1179, Mar. 31, Hanging sashes and [shutters.

- Mears, L. R. (Lake), 877, Mar. 11, Boots and shoes.
 Medlen, R. W., 3426, Oct. 22, Obtaining light from petro-
 [leum, &c.]
 Mégret, J. L. (Gilbee), 959, Mar. 15, Stoppers for bottles, &c.
 Mein, W., 3828, Nov. 24, Steam governors.
 Meinicke, C. (Simon), 1231, Apr. 3, Wire tramways.
 Meldrum, E., 2407, July 12, Paraffin oil.
 Melhuish, R. M., 946, Mar. 14, Sewing-machines.
 Melling, J. W., 1260, Apr. 4, Valves.
 — J. W., 1996, June 4, Valves.
 — J. W., 3622, Nov. 6, Valves.
 Mellor, G., 1767, May 14, Lifting and placing blocks of
 [stone, &c.]
 — W., & Schofield, J., 546, Feb. 13, Smoothing,
 [&c. fabrics.]
 — W. W., & Whipp, J., 132, Jan. 13, Cutting glass.
 — W. W., & Whipp, J., 2275, July 1, Cutting glass.
 Melville, D., & Smith, A., 3767, Nov. 20, Treating wool,
 [&c. for size.]
 Mendel, S., 1272, Apr. 5, Woven fabrics.
 — S., 3385, Oct. 18, Horse-shoes.
 Mendez, J. J. (Matthey), 1977, May 31, Fitting ships
 [for carrying cattle.]
 Mendheim, G. (Hunt), 1410, Apr. 18, Firing ceramic
 [ware, &c.]
 Mennons, M. A. F. (De Telescheff), 2310, July 3, Steam-
 [engines.]
 Mensing, H. C. L., 3739, Nov. 18, Tailors' and other irons.
 Mercer, J., & Worthington, S. K., 647, Feb. 20, Looms.
 — J. W., 2459, July 16, Printing-machines.
 Meritens, A. de, & Kresser, V. (Johnson), 3937, Dec. 1,
 [Paper-pulp.]
 Merrill, G. (Tongue), 2558, July 26, Steam-boilers.
 — G. (Tongue), 2560, July 28, Steam-engines
 [and pistons.]
 — G. (Byron), 3483, Oct. 27, Looms.
 Merriman, E. P., & Bushnell, H. (Hughes), 1854, May 22,
 [Compressed air motors.]
 Merriman, J. D., 993, Mar. 18, Lighting and extin-
 [guishing lights.]
 Messenger, T. G., 4001, Dec. 5, Pipe-joints.
 Mestre, J. A. De (Bonneville), 1036, Mar. 20, Corking
 [bottles.]
 Metcalf, J., 1837, May 21, Boilers.
 Metcalfe, T. A., & Massingham, W., 3329, Oct. 15, Manure.
 Metge, E., & Vuibert, F. N. C., 710, Feb. 26, Preserving
 [meat.]
 Meunier, M. (Sington), 1889, May 26, Cop-tubes.
 Mewburn, J. C. (Deplechin & Mathelin), 409, Feb. 4, Cocks.
 — J. C. (Dubreuil), 410, Feb. 4, Lubricating.
 — J. C. (Detraux), 2323, July 4, Spinning.
 — J. C. (Hatzfeld), 2411, July 12, Preserving
 [wood.]
 — J. C. (Arntz), 3100, Sep. 22, Buildings and
 [materials.]
 — J. C. (Pintsch), 3101, Sep. 22, Lighting railway
 [carriages.]
 — J. C. (Gilquin & De Lacanve), 3339, Oct. 15,
 [Fire-escapes.]
 — J. C. (Dowd & Dowd), 3363, Oct. 17, Furnaces.
 Mewis, G. E., 3703, Nov. 14, Connecting cords to win-
 [dow-sashes, &c.]
 Meyer, G. F., & Lasso, V. F. (Newton), 1995, June 3,
 [Safety-valves.]
 Meijh, O., & Voelter, H. (Hunt), 1421, Apr. 19, Paper, &c.
 Meylert, A. P. (Haseltine), 213, Jan. 18, White lead;
 [purifying carbonic acid gas.]
 Meyn, J. C. C. (Smith), 1310, Apr. 9, Steam-boilers,
 [fire-boxes, &c.]
 Michaud, P. F., 629, Feb. 20, Axle-boxes and muffles
 [for carriages, &c.]
 Michel, C., & Frager, A., 3119, Sep. 23, Water-meters.
 Michel, L. C. B. (Townsend), 1050, Mar. 20, Lifting
 [permanent way of railways, &c.]
 Michelet, J. C. (Gedge), 403, Feb. 3, Converting motions.
 Mickle, W., 803, Mar. 5, Smelting and puddling iron.
 — W., 921, Mar. 13, Economising fuel.
 — W., 1656, May 7, Economising fuel.
 Middlehurst, James & J., 346, Jan. 29, Potato & other
 [gatherers, &c.]
 — John & J., 346, Jan. 29, Potato & other
 [gatherers, &c.]
 Middlemass, J., 306, Jan. 25, Clerical costumes.
 Middleton, A., & Miller, D. K. (Hunt), 2793, Aug. 25,
 [Locks and keys.]
 Midgley, C., 949, Mar. 15, Domestic fire-grates.
 — J. (Cochcroft, & Ackroyd), 3438, Oct. 22, Twist-
 [ing fibres.]
 Mignot, J. S., 2537, July 25, Fabrics for umbrellas, &c.
 — J. S., 3096, Sep. 20, Fabrics for umbrellas, &c.
 Milburn, J., 483, Feb. 10, Chimney cowls.
 — R., & Jackson, H., 2004, June 5, Drying, &c.,
 [pent.]
 — R., & Jackson, H., 2855, Aug. 30, Fuel; filter-
 [ing, &c. sewage; moulding plastic materials.]
 Mildé, C. F. & Vinard L. C. (Newton), 706, Feb. 25,
 [Electric-clocks.]
 Miles, C. W., Hickey, P., & Babbett, H. M. (Griffin),
 [908, Mar. 13, Carpet looms.]
 Miles, W. C., 1506, Apr. 25, Lamps.
 Millar, A., 3950, Dec. 2, Seoring apparatus.
 Miller, A. T., 3562, Nov. 1, Shipbuilding.
 — D. C., 925, Mar. 18, Treating liquids; granulating
 [&c. materials.]
 Miller, D. K., & Middleton, A. (Hunt), 2793, Aug. 25,
 [Locks and keys.]
 — E. (Edwards), 2689, Aug. 13, Railroad cars.
 Miller, J., & Rhodes, S. G., 1756, May 14, Tobacco
 [pipes and cigar holders.]
 — M., 2031, June 7, Distilling alcoholic spirits.
 — R. J., & Moir, J., 2094, June 13, Hanging, &c.
 [curtains.]
 Miller, S. H., Folk, J. E., & Wilson, C. F. (Newton),
 [19, Jan. 1, Dies.]
 Miller, T., 1777, May 15, Re-capping cartridge cases.
 — T. W., 571, Feb. 15, Fire-arms.
 Mills, B. J. B. (Cathcart & Negley), 431, Feb. 5, Screw-
 [propellers.]
 — B. J. B. (Taylor), 1549, Apr. 29, Repeating ord-
 [nance and cartridges.]
 — B. J. B. (Bottom), 1983, June 3, Governors.
 — B. J. B. (Lamb), 2126, June 17, Water-proof gum.
 — B. J. B. (Timby), 2127, June 17, Railway carriages.
 — B. J. B. (Bolette), 2477, July 18, Carding-engines.
 — B. J. B. (Hypersiel), 2550, July 26, Stopping the
 [motion of cages or loads down mines, &c.]
 — B. J. B. (Charlton), 2810, Aug. 26, Shaft couplings
 [hubs for wheels, &c.]
 — B. J. B. (Taylor), 2811, Aug. 26, Battery guns.
 — B. J. B. (Knous), 2880, Sep. 2, Sewing-machines.
 — B. J. B. (Stiles), 3210, Oct. 3, Power-presses.
 — B. J. B. (Burgess), 3589, Nov. 4, Iron and steel.
 — B. J. B. (Sim), 3763, Nov. 19, Preserving fibrous
 [materials.]
 — B. J. B. (Fanchamps-Nicolaï), 4270, Dec. 30, Rais-
 [ing nap fabrics.]
 Mills, D., & Goodyear, C., 1965, May 31, Boots and shoes.
 — F., & Kay, T. B., 379, Jan. 31, Carding-engines.
 — James H., 1607, May 3, Traction and tramway lo-
 [comotives.]
 Mills, John H. (Curtis), 1924, May 28, Steam-boilers and
 [engines.]
 Mills, Joseph L., & Monkhouse, T. S., 123, Jan. 11, Print-
 [ing and cutting paper.]

- Mills, Joseph L., & Monkhouse, T. S., 1971, May 31, [Printing and cutting paper.
— R., 948, Mar. 15, Gas furnaces.
Milner, E., 196, Jan. 17, Lubricating.
— E., 1997, June 4, Economising fuel.
— J., & Fleming, F., 1035, Mar. 20, Wire cards and [reed wires.
Milnes, J. F., 3541, Oct. 31, Utilizing sewage.
Milroy, J., 2228, June 27, Columnar foundations.
Miner, T. F. (Newton), 2953, Sep. 8, Blast furnaces.
— T. F., Ray, B., & Jagger, I. (Newton), 2960, [Sep. 9, Blast furnaces.
Mines de Lens Société des (Imray), 2669, Aug. 11, Dis- [charging and loading goods.
Minister, R. H., Winters, V., & McGregor, R. & A. (Clark), [4047, Dec. 8, Hulling maize.
Minshaw, W., & Dunkerley, B., 603, Feb. 18, Felting hat [bodies, &c.
Minton, T. W., 1526, Apr. 26, Ovens for pottery, &c.
— T. W., 1709, May 10, Ovens for pottery, &c.
Mirapeix, N. T. Y. (Newton), 4098, Dec. 12, Cutting toothed [wheels.
Mirfield, M., & Scott, J., 423, Feb. 5, Combing fibres.
— M., & Scott, J., 1726, May 12, Combing fibres.
— M., & Scott, J., 2082, June 12, Combing fibres.
— M., & Scott, J., 4233, Dec. 24, Combing fibres.
Mirfin, T., & Maleham, C. H., 940, Mar. 14, Fire-arms.
Mirreles, J. B. (Weston), 1678, May 9, Driving clutch.
Mitchell, James, 718, Feb. 26, Harvesting machine knives, [&c.
— James, 2035, June 7, Syphon ventilators.
— James B., 4231, Dec. 24, Anodyne compound.
— John, & Morrison, W., 1198, Apr. 1, Mules.
— Joseph, 3664, Nov. 11, Substitute for coal.
— N. W., 3859, Nov. 26, Sorting and sizing corks.
— W., 1203, Apr. 1, Utilizing waste heat of smiths' [fires.
— W., 2861, Aug. 30, Motive-power.
— W. H., & Jordinson, R., 2173, June 21, Carding- [engines.
Mobberley, W., & Skelton, W., 1647, May 7, Furnaces.
Moeller, P. K. (Friedlaender), 2340, July 7, Printing- [presses.
Moffatt, A. C., 2386, July 10, Covering wire.
Mohr, C., 2968, Sep. 10, Deed-boxes and trunks.
Moir, J., & Miller, R. J., 2094, June 13, Hanging, &c. [curtains.
Moline, F., & Stock, T. G., 2852, Aug. 29, Filling sugar [casks, &c.
Molloy, B. C., & Fitz-Gerald, D. G., 2102, June 13, [Chromic acid.
— B. C., & Fitz-Gerald, D. G., 2103, June 13, Vol- [taic batteries.
Molynaux, E. L., Rich, A., Reynolds, C. T., Hidden, T. B., [& Richardson, L. (Haseltine), 2600, July 31, [Preparing and packing water-colors.
Moncomble-Carly, M. (Lake), 4112, Dec. 13, Thrashing- [machines.
Money, F. J., 3643, Nov. 8, Preserving food.
Monkhouse, T. S., 3918, Nov. 29, Printing & cutting paper.
— T. S., & Mills, J. L., 123, Jan. 11, Printing [and cutting paper.
— T. S., & Mills, J. L., 1971, May 31, Printing [and cutting paper.
Monteith, J., 4152, Dec. 17, Velocipedes.
Montgomery, J. A. (Shearman), 620, Feb. 19, Journal- [boxes.
Moody, C. (Bousfield), 2023, June 6, Locks.
Moody, C. P., 2175, June 21, Cultivating land.
— E. T., 1123, Mar. 26, Gas.
Mooney, J. H. & Comstock, C. C. (Lake), 1283, Apr. 7, [Sewing-machines.
Moore, B. T., 3939, Dec. 1, Water-meters and ships' logs.
— E. C. S., 4019, Dec. 6, Supplying fuel to fire-places.
— F., 4107, Dec. 13, Washing wool.
— G., & Le Moussu, B. C., 2474, July 18, Engraving.
— G. M., 3774, Nov. 20, Furnace fire-bars.
— H., 2373, July 9, Steam-engines.
— H., 4034, Dec. 8, Roadways or pavements.
— H., & Steven, T., 4156, Dec. 18, Road-making [and paving.
Moore, R., & Williamson, T. R. (Russell), 1556, Apr. 29, [Nitrate of soda.
Moore, S. J., & Courtney, R. H., 3078, Sep. 19, Electro- [magnets.
— W., 3801, Nov. 21, Moulding ingots of iron & steel.
Moorey, E. (Lake), 4089, Dec. 11, Preserved meat tins.
Moorhouse, J., 574, Feb. 15, Fire-ranges.
Moorwood, T. P., 1082, Mar. 24, Domestic fire-stoves.
Moran, H. & P. (Lake), 2100, June 13, Horse-shoes.
— P. & H. (Lake), 2100, June 13, Horse-shoes.
Morand, A. (Derham), 411, Feb. 4, Kilns.
Moreau, E., 3614, Nov. 6, Sewing-machines.
Morewood, E., & Rogers, J. H., 3125, Sep. 24, Coating [metals.
— E., & Rogers, J. H., 3126, Sep. 24, Coating [metals.
— E., & Rogers, J. H., 4242, Dec. 24, Coating [metals.
Morgan, A., & Sim, R., 1215, Apr. 2, Varnish.
— T. M., & Crowther, C., 2839, Aug. 28, Coating [metals.
— W. H., 4061, Dec. 10, Removing, &c. incrus- [tation in steam boilers.
Morgan-Brown, W. (Thomas), 612, Feb. 19, Looms.
— W. (Giacomini), 687, Feb. 24, Carding- [engines.
— W. (Littman), 793, Mar. 5, Ice-making.
— W. (Brooks), 822, Mar. 7, Lasting boots [and shoes.
— W. (Von Seilern), 1057, Mar. 21, Locks.
— W. (Richardson), 1111, Mar. 26, Hy- [draulic hose.
— W. (Weed), 1218, Apr. 2, Cutting files.
— W. (Hersey, Hersey, & Gray), 1233, [Apr. 3, Granulators.
— W. (Camozi & Schlösser), 1246, Apr. 3, [Verifying positions of rails of rail & tramways.
— W. (Ripamonti & Ripamonti), 1423, [Apr. 19, Barometers.
— W. (Toselli), 1440, Apr. 21, Trans- [mitting motive-power.
— W. (Gates & Gates), 1634, May 6, Axle- [boxes.
— W. (Dodge), 1901, May 27, Hydraulic [hose.
— W. (Crowell), 3677, Nov. 11, Paper-bags.
Moriarty, E., & Céré, J. J. R., 1686, May 9, Treating [sewage.
Moride, E. (Lake), 4120, Dec. 15, Vessels for holding, [&c. explosive liquids.
Moro, F. A., & J. (Lake), 3597, Nov. 5, Compressing [peat.
— J. & F. A. (Lake), 3597, Nov. 5, Compressing [peat.
Morrell, Hon. D. J. (Lake), 3104, Sep. 22, Rolling steel [and iron.
Morris, E. R., 29, Jan. 2, Measuring distances on maps, &c.
— E. R., 3948, Dec. 2, Measuring and registering [distances.
— Morris, G. W., Robinson, J. S., & Mackenzie, G. N. [(Benson), 3697, Nov. 13, Oil-gas.
— Morris, H. L., & Thomas, J., 1049, Mar. 20, Finishing [metal plates.

- Morris, J., 3595, Nov. 5, Covers of sanitary & other pans.
 — J. M., 2163, June 20, Mechanical illusions.
 — R., 1033, Mar. 20, Boots, shoes, and socks.
 — R. W., 3422, Oct. 22, Revolving shutters.
 — T. Shewell, & Skinner, G., 394, Feb. 1, Furniture [casters].
 — T. Southern, Bromiley, W. L., & Rushton, T. H., [797, Mar. 5, Spinning, &c].
 — W., 1344, Apr. 12, Waterproofing and preserving [silk, wool, leather, &c].
 Morrison, J., 1163, Mar. 28, Propelling ships.
 Morrison, J. B. (Lake), 3012, Sep. 13, Adjustable brackets.
 Morrison, W., & Mitchell, J., 1198, Apr. 1, Mules.
 Morse, E. C. (Vaughan), 4154, Dec. 18, Balloons.
 Mort, T. S. & Nicolle, E. D. (Mort), 2153, June 19, [Cooling and freezing].
 Mort, W. (Nicolle & Mort), 2153, June 19, Cooling and [freezing].
 Morton, A., 1699, May 10, Curtains.
 — C., 2663, Aug. 8, Roasting coffee.
 — John, & Kimball, A., 2227, June 27, Sewing- [machines].
 — Joseph, Greenwood, G., & Saville, T., 568, Feb. 15, [Heating rooms, &c].
 — R., 3902, Nov. 29, Refrigerators.
 Morton, T. C. (Hughes), 2208, June 25, Picker motion.
 Moseley, C., 916, Mar. 13, Condensing vapors of naphtha.
 — J., & Holbrook, T., 3367, Oct. 17, Looms.
 — W., 2969, Sep. 10, Electric-signals.
 Moss, J., 3223, Oct. 4, Sewing-machines.
 — R., & Tomlinson, R., 2207, June 25, Looms.
 Motay, C. M., Tessié du (Smith), 328, Jan. 28, Baryta.
 Mott, C. F. & H. H., Howes, J., & Richards, P., 2593, [July 31, Raising, &c. window-blinds].
 — F. D., 3028, Sep. 15, Rotary-engines.
 — H. H. & C. F., Howes, J., & Richards, P., 2593, [July 31, Raising, &c. window-blinds].
 Moule, H., & Girdlestone, J. W., 1867, May 23, Dry closets, [commodes, &c].
 Mounce, Baron T. de, 1094, Mar. 25, Cutting wood.
 Mountain, H. B. (Lake), 1223, Apr. 2, Life preserving [mattress].
 — H. B. (Lake), 3200, Oct. 2, Life preserving [mattress].
 Moussu, B. C. le, & Moore, G., 2474, July 18, Engraving.
 Mowbray, J., 965, Mar. 15, Safety apparatus for cage hoists.
 Moy, T., 3088, Sep. 20, Working slide-valves.
 — T., 4078, Dec. 11, Working slide-valves.
 — T., & Shill, R. E., 1005, Mar. 19, Steam-boilers [and engines].
 Mudie, D., 1598, May 3, Venetian blinds.
 Muhé, H. (Johnson), 3938, Dec. 1, Glazing photographs.
 Mühlig, M. (Lake), 2716, Aug. 16, Glass furnaces, &c.
 Muir, H., & Caldwell, J., 2381, July 10, Steam steering [engines].
 — J. S., 3318, Oct. 14, Refining hydrocarbon oils.
 — J. S., 3319, Oct. 14, Gas.
 — M. A., McIlwham, J., Robertson, W., & Orchar, J. G., [3427, Oct. 22, Winding yarns].
 Muirhead, L. P., & Wood, R. J., 244, Jan. 21, Speed [indicators].
 Mulholland, J. R. T., 2937, Sep. 6, Heckling-machines.
 Mullard, T., & Bentley, S., 3509, Oct. 29, Heat generator [and coal economiser].
 Muller, J. A., 2471, July 17, Measuring flow of water, &c.
 Mulholland, H. (Rogers), 2945, Sep. 8, Cut nails.
 Muntz, P. A., & Sharp, T. B., 2843, Aug. 28, Condensing [and collecting fumes].
 — P. A., & Sharp, T. B., 3741, Nov. 18, Steam- [boiler tubes].
 Murdoch, H. H. (De Rutenberg), 360, Jan. 30, Explosive [compounds].
 Murdoch, H. H. (Bède), 1711, May 10, Operating on [cardings of fibre].
 — H. H. (Bède & Co. & Farcot & Sons), 1862, [May 22, Steam-engines].
 — H. H. (Snakers), 1863, May 22, Spinning.
 — H. H. (Haggenmacher), 2547, July 26, Win- [nowing and sorting grit, grain, &c].
 — W., 1209, Apr. 2, Regulating speed of engines.
 Murphy, J., 1918, May 28, Wheels and axles.
 — T., 2166, June 20, Bottle-stoppers.
 — W., 1941, May 29, Concrete building.
 Murray, C. H., 3366, Oct. 17, Moulding bricks and tiles.
 Musgrave, J., & Shillington, T. F., 2749, Aug. 20, Stoves.
 Mustard, J., & Acton, B., 1635, May 6, Feeding carding- [engines].
 Mutrécy, Count C. de (Gilbee), 2940, Sep. 6, Hydraulic- [engines].
 — Count C. de, & Piatti, T. (Newton), 1834, [May 20, Hydraulic-engines].
 Myers, A. G. (Lake), 127, Jan. 11, Stove and other [pipes, &c].
 Myers, J. J., 1077, Mar. 24, Ventilating drains, &c.
 — S., 512, Feb. 12, Stoves and grates.
 — S., 3368, Oct. 17, Stoves.

N.

- Nail Co., National Horse (Haseltine), 3737, Nov. 18, [Horse-shoe nails].
 Nancarrow, J. L., 1137, Mar. 27, Roofing-tiles.
 Nangle, W. C., 495, Feb. 11, Paints.
 Napier, J., 246, Jan. 21, Excavating under water.
 — J. R., 3357, Oct. 17, Fire-places.
 Nasmith, J., 674, Feb. 22, Preparing fibres for spinning.
 National Horse Nail Co. (Haseltine), 3737, Nov. 18, [Horse-shoe nails].
 Naylor, J., & Jagger, J., 4173, Dec. 19, Looms.
 — J., Crabtree, W., Bottomley, W. H., & Shackle- [ton, J., 4162, Dec. 18, Looms].
 — M., & Bottomley, W., 167, Jan. 15, Weaving.
 Neale, J., 4143, Dec. 17, Electric-telegraphs.
 Needham, John, & Hodgson, C. & W., 2724, Aug. 16, [Weighing].
 — Joseph, 31, Jan. 2, Fire-arms and cartridges.
 Negley, J. S., & Cathcart, J. L. (Mills), 431, Feb. 5, [Screw-propellers].
 Negretti, H., & Zambra, J. W., 3091, Sep. 20, Ther- [mometers].
 Negri, C. de, 1437, Apr. 21, Engines.
 Neil, W., 2067, June 11, Distilling spirituous liquors.
 Neill, F. A. R. & W., 4058, Dec. 9, Railway signals.
 — J., 377, Jan. 31, Forming sugar into blocks.
 — W. & F. A. R., 4058, Dec. 9, Railway signals.
 Netherwood, W., & Keighley, C. W., 3398, Oct. 20, [Cutting corded fabrics].
 Nettlefold, J., 2065, June 11, Registering votes by ballot.
 Neubecker, A., 2500, July 21, Cooling worts.
 Neuber, C. (Gereke), 3555, Nov. 1, Gas-regulators.
 Neville, G. F., 2918, Sep. 5, Leather.
 Newall, J., 1220, Apr. 2, Producing motive force.
 — R. S., 1741, May 13, Magnesia.
 — T., & Taylor, W., 1974, May 31, Indicators and [preventing fire in mules].
 Newbold, E., 1677, May 9, Furnace bars.
 Newcomb, W., & Harwood, I. K. (Haseltine), 967, Mar. 15, [Pump pistons and valves].
 Newell, L. D., 503, Feb. 11, Ships' berths and sofas.
 — W., 514, Feb. 12, Ornamenting tin-plate articles.

- Newman, J., Edkins, C., & Greaves, T., 3685, Nov. 12, [Sleeve-links, solitaires, &c.]
- Newport, W. W., 3107, Sep. 23, Supporting window tickets.
- Newton, A. V. (*Averell*), 20, Jan. 1, Ruling paper.
- A. V. (*Burdon*), 257, Jan. 22, Raising and [forcing liquids.]
- A. V. (*Kirkham*), 444, Feb. 6, Treadle motions.
- A. V. (*Uda & Uda*), 553, Feb. 14, Extension [ladders.]
- A. V. (*Bingham, Bingham, Van Allen, & Stone*), [608, Feb. 18, Printing-presses.]
- A. V. (*Mildé & Vimard*), 706, Feb. 25, Electric- [clocks.]
- A. V. (*Lowman*), 1153, Mar. 27, Picks, adzes, [shovels, hoes, &c.]
- A. V. (*Grechi*), 1172, Mar. 29, Ascertaining [temperatures; indicating presence, &c. of fires.]
- A. V. (*Kane*), 1238, Apr. 3, Shuttle motions.
- A. V. (*Wilnot*), 1415, Apr. 18, Metal tubing.
- A. V. (*Covert*), 1541, Apr. 28, Brush-making.
- A. V. (*Nobel*), 1570, Apr. 30, Explosive com- [pounds.]
- A. V. (*Beard*), 1882, May 24, Bale fastenings.
- A. V. (*Lassoe & Meyer*), 1995, June 3, Safety- [valves.]
- A. V. (*Wallace*), 2015, June 5, Electro-mag- [netic engines.]
- A. V. (*Türpe*), 2202, June 24, Hat pegs or hooks.
- A. V. (*Babbitt*), 2271, June 30, Propelling boats [and vessels.]
- A. V. (*McKeever*), 2348, July 7, Cartridge boxes.
- A. V. (*Loryea*), 2349, July 7, Sewing books.
- A. V. (*Sinclair*), 2572, July 29, Filtering; [washing cloths, &c.]
- A. V. (*Teyssonnière*), 3176, Sep. 30, Dyeing, &c. [fabrics.]
- A. V. (*Mauger*), 3448, Oct. 23, Cutting and [arranging cards.]
- A. V. (*Eads*), 3591, Nov. 4, Bridges and roofs.
- A. V. (*Deshayes*), 3634, Nov. 7, Embroidering- [machines.]
- A. V. (*Teyssonnière*), 3814, Nov. 22, Copying inks.
- A. V. (*Shepard*), 3864, Nov. 26, Waterproof [boots, &c.]
- A. V. (*Greene*), 3899, Nov. 28, Finishing felted [goods.]
- A. V. (*Waldenburg*), 4151, Dec. 17, Treating [diseases.]
- A. V. (*Jacquemart*), 4204, Dec. 22, Aluminium.
- A. V. (*Westcott*), 4205, Dec. 22, Chucks.
- G., 1007, Mar. 19, Lubricants.
- H. E. (*Piatti & Mutrécy*), 1834, May 20, Hy- [draulic-engines.]
- H. E. (*Lemerre & Vu*), 2134, June 17, Railway [couplings.]
- H. E. (*Maurissèn*), 2200, June 24, Bits for horses.
- H. E. (*Fleetwood*), 2388, July 10, Sail and drag [for boats.]
- H. E. (*Miner*), 2953, Sep. 8, Blast furnaces.
- H. E. (*Ray, Jagger, & Miner*), 2960, Sep. 9, [Blast furnaces.]
- H. E. (*Goodrich & Kornblum*), 2977, Sep. 10, [Feed-water indicators.]
- H. E. (*Claude*), 3177, Sep. 30, Folding or plea- [ting paper.]
- H. E. (*Galasse-Ketin*), 3308, Oct. 11, Con- [necting pipes.]
- J., Edgerton, J., & Hordley, E., 3772, Nov. 20, [Communicating apparatus.]
- T., 2955, Sep. 8, Saddles and saddletrees.
- T. C., & Dawson, G., 1176, Mar. 29, Kitchen- [ranges.]
- Newton, W. E. 2720, Aug. 16, Grinding and polishing [metals.]
- W. E. (*Wilson, Miller, & Folk*), 19, Jan. 1, Dies.
- W. E. (*Wolff*), 28, Jan. 2, Transposing key-board [for pianos, &c.]
- W. E. (*Doury*), 89, Jan. 8, Waterwheels and [mounting same.]
- W. E. (*Goodrich, Hillman, & Goodrich*), 90, [Jan. 8, Puddling furnaces.]
- W. E. (*Broughton*), 256, Jan. 22, Fire-arms.
- W. E. (*Potter & Lamb*), 340, Jan. 28, Spinning.
- W. E. (*Ruggieri*), 1064, Mar. 21, Fog-signals.
- W. E. (*Truesdell*), 1875, May 23, Stoves for [hydro-carbon oils.]
- W. E. (*Caumon or Absterdam*), 2374, July 9, [Semi-steel and railway bars.]
- W. E. (*Pastré*), 2511, July 22, Steam-generators.
- W. E. (*Couillard*), 2642, Aug. 6, Moulding [bricks, &c.]
- W. E. (*Ashe*), 2736, Aug. 18, Converting motions.
- W. E. (*Waring*), 2743, Aug. 19, Treating fabrics.
- W. E. (*Todd*), 2821, Aug. 27, Hacking and [combing fibres.]
- W. E. (*Babbitt*), 2962, Sep. 9, Steam-boilers and [condensers.]
- W. E. (*Eads*), 2978, Sep. 10, Bridges.
- W. E. (*Eads*), 3002, Sep. 12, Bridges.
- W. E. (*Camacho*), 3461, Oct. 24, Electro-magnets.
- W. E. (*Baudouin*), 3548, Oct. 31, Bleaching and [drying sugar.]
- W. E. (*Douillard*), 3970, Dec. 3, Night signals.
- W. E. (*Mirapeix*), 4098, Dec. 12, Cutting toothed [wheels.]
- Ney, J. J., 3302, Oct. 11, Cramps for boots, shoes, &c.
- Nicholl, H. F., 2394, July 11, Carriage springs.
- Nicholls, J. F., & Rust, R., 1873, May 23, Condensing, [&c. milk.]
- Nichols, B. T. (*Wilkinson*), 3500, Oct. 28, Nails & spikes.
- F. (*Clark*), 1205, Apr. 1, Raising and measuring [acids, &c.]
- F. W. (*Haseltine*), 303, Jan. 25, Hinges.
- F. W. (*Haseltine*), 4276, Dec. 30, Hinges.
- Nichols, J., 215, Jan. 18, Ventilating waterclosets, &c.
- W., & Lucas, J., 2732, Aug. 18, Cutting coal.
- Nicholson, J. & T. B., 731, Feb. 27, Railway buffers.
- R., 2199, June 24, Gas & water main junctions.
- R., 2524, July 24, Charging, &c. gas-retorts.
- T. B. & J., 731, Feb. 27, Railway buffers.
- W. H., & Holding, J., 3752, Nov. 19, Whips.
- Nicklin, T., & Frost, J., 1396, Apr. 17, Kilns.
- Nickoll, J. J., 2796, Aug. 25, Signalling apparatus.
- J. J., 4106, Dec. 13, Signal-lamp lenses.
- Nicolaï, P. (*Fanchamps*—Mills), 4270, Dec. 30, Raising [nap of fabrics.]
- Nicolas, Chamon, & Co. (*Henderson*), 2259, June 30, Gauges.
- Nicolle, E. D. & Mort, T. S. (*Mort*), 2153, June 19, [Cooling and freezing.]
- Nicols, A., & Simons, J. F. N. B., 3884, Nov. 27, Pre- [serving substances.]
- Nield, T. A., 1109, Mar. 26, Fuel-economisers.
- Nightscales, E., & Thomas, E. W., 1454, Apr. 22, Water- [lift and injector.]
- Nimmo, G., 2162, June 20, Steel furnaces.
- G., 3792, Nov. 21, Preventing smoke in furnaces.
- Nisbet, A., & McSherry, M., 4035, Dec. 8, Fire-places.
- W., 2111, June 14, Waterproof fabrics.
- Nixon, J., & Winterbottom, J., 1074, Mar. 22, Rolling [cutlery steel, &c.]
- T., & Quin, P., 1522, Apr. 26, Sulphate of soda.
- Noad, J., 539, Feb. 13, Sulphurated lead.
- J., 2921, Sep. 5, Fire-lighters.

Noad, J., 3917, Nov. 29, Bottle envelopes.
 Nobel, A. (Newton), 1570, Apr. 30, Explosive compounds.
 Noble, A., 1729, May 12, Vents for heavy guns.
 — B., & Armitage, J. W., 952, Mar. 15, Cleaning yarn.
 — F. J., 2128, June 17, Ratchet braces.
 — G., 607, Feb. 18, Paper-pulp.
 — W., 3335, Oct. 15, Utilising waste heat in steam-engines.
 Nobles, J. C., & Gustin, M. (Lake), 3919, Nov. 29, [Flash-light signals].
 Nolan, P. W., 2648, Aug. 7, Folding seats.
 Nolden, M., 1552, Apr. 29, Cleansing feed-water.
 Norbury, J., 4015, Dec. 6, Valves for hydraulic presses, &c.
 Norman, J., 135, Jan. 13, Clipping animals.
 Normandy, A. L., 3226, Oct. 4, Distilling-machines.
 Norris, James, 2143, June 18, Measuring corn, &c.
 — John, 504, Feb. 11, Drawing instruments.
 — R. S., 2815, Aug. 27, Preventing blown out shots [in mines, &c.].
 Nott, T., 3265, Oct. 8, Fixing knobs, discs, &c. upon [spindles].
 Noury, A., & Masse, J. (Barlow), 2771, Aug. 21, Peat-fuel.
 Noyes, T. H., & De Laskarzewski, C. A., 1470, Apr. 23, [Musical instruments].
 Nuttall, F. D., 3628, Nov. 7, Gas box, &c. for regenerative [furnaces].

O.

O'Berne, H., 1510, Apr. 26, Raising, &c. carriage heads.
 Ochwaldt, C. P. H., 1601, May 3, Slide-valve gear.
 Oddy, J., Spencer, B., & Washington, T., 3346, Oct. 16, [Washing wool].
 O'Donoghue, J. D. & W. (Clark), 2420, July 14, Tooth-brushes.
 — W. & J. D. (Clark), 2420, July 14, Tooth-brushes.
 O'Dwyer, A. V., 1942, May 29, Feeding young animals.
 — A. V., 1952, May 30, Feeding young animals.
 Oglesby, J., & Jackson, J. A., 897, Mar. 12, Fuel-economisers.
 Ohl, E. (Wirth), 2171, June 21, Turbines.
 Okell, R., 4029, Dec. 6, Harness.
 O'Lawlor, L. de Bejar (Browne), 2327, July 4, Electro-telegraphy.
 Oldershausen, Baron W. (Haseltine), 1697, May 10, [Lighting, &c. gas-burners].
 Oldfield, E. (Haseltine), 3700, Nov. 13, Looms.
 Oldfield, J., & Hetherington, J. M., 3620, Nov. 6, Mules [for spinning].
 Oldham, J., 1531, Apr. 28, Economising fuel in steam-generators.
 — J., Bird, J., Worth, J., & Fogg, J., 2886, Sep. 2, [Stiffening felt hats].
 Oldknow, J., 24, Jan. 2, Making fabrics in lace-machines.
 — J., 771, Mar. 4, Making fabrics in lace-machines.
 Oldroyd, J. & M., Woodcock, J., & Coulter, J., 898, [Mar. 12, Dyeing, bleaching, &c. fabrics].
 — J. & M., Woodcock, J., & Coulter, J., 4157, [Dec. 18, Dyeing, bleaching, &c. fabrics].
 — M. & J., Woodcock, J., & Coulter, J., 898, [Mar. 12, Dyeing, bleaching, &c. fabrics].
 — M. & J., Woodcock, J., & Coulter, J., 4157, [Dec. 18, Dyeing, bleaching, &c. fabrics].
 Olds, N. G., 1796, May 17, Carriage wheels.
 Olds, P. F., Mason, F. H., & McCarty, B. F. (Haseltine), 681, Feb. 22, Economising fuel.
 Olley, G., & Jackson, W., 338, Jan. 28, Heating feed-water.
 Olsen, C. H. G. (Jensen), 149, Jan. 14, Printing telegraphs.

Onderdonk, J. P., & Howlett, E. J. (Haseltine), 1622, [May 5, Paper-bags].
 — J. P., & Howlett, E. J. (Robinson), 2973, [Sep. 10, Paper bags].
 Onion, T. & W., 1536, Apr. 28, Domestic fire-grates or [ranges].
 — W. & T., 1536, Apr. 28, Domestic fire-grates or [ranges].
 Openshaw, G., 2695, Aug. 14, Card clothing.
 Oppenheimer, L., 3971, Dec. 3, Tiles or slabs.
 Orchar, J. G., Muir, M. A., McIlwham, J., & Robertson, [W., 3427, Oct. 22, Winding yarns].
 Ord, J. R., & Maddison, H., 3249, Oct. 7, Stone-breakers.
 Orme, T., & Gardner, J., 4086, Dec. 11, Grinding colors.
 Ormiston, J. W., 1660, May 8, Pig-iron.
 — J. W., 3609, Nov. 6, Pig-iron.
 Orsat, L. H., 1853, May 22, Analysing gas.
 Osborn, S., & Theaker, H., 313, Jan. 27, Forging metals.
 — S., & Alley, S., 3379, Oct. 18, Screw-propellers.
 Osborne, D. T., & Palmer, R., 198, Jan. 17, Air-tight stoves.
 Osborne, J. W. (Johnson), 1947, May 29, Speed indicators.
 Osborne, T., & Baladia, J., 917, Mar. 13, Knitted fabrics.
 Osbourn, F., 2823, Aug. 27, Driving band saws.
 Osenbrück, A. (Wirth), 2991, Sep. 11, Lubricators.
 O'Shea, W. H., 4153, Dec. 17, Extracting, &c. sulphur.
 Ostrander, J. (Johnson), 357, Feb. 14, Nut blanks.
 Oswald, W. R., 2744, Aug. 19, Steering apparatus.
 Otto, N. A. (Imray), 1628, May 6, Caloric-engines.
 — N. A. (Imray), 1946, May 29, Caloric-engines.
 Overman, N., & Parvin, R. C. (Lake), 2758, Aug. 20, [Traction-engines].
 Owen, C., 534, Feb. 13, Communicating in trains.
 — C. T., 3506, Oct. 29, Raising minerals.
 — James, 160, Jan. 15, Safety apparatus for mine [cages, &c.].
 — James, 3034, Sep. 16, Steam-boilers.
 — John, 1136, Mar. 27, Threading shuttles.
 — R., 3502, Oct. 28, Black paint.
 — W., & Hill, J., 583, Feb. 17, Stove grates.

P.

Pabst, G. F., & Johnson, E. & C., 2877, Sep. 1, Presses for [color printing].
 Pace, E., 3272, Oct. 9, Cutting splints.
 Paddison, H., 193, Jan. 17, Breakwaters, docks, piers, &c.
 — H., 3399, Oct. 20, Balances or weighing machines.
 Padgett, T., & Woolley, J., 3348, Oct. 16, Brick-making.
 Paes de Sande e Castro, A., & Castro, A. de S. A. e [Condi de Penamacor, & Hopcraft, T. S., 2484, [July 19, Citric acid; tartaric acid; alcohol].
 Page, F., 4020, Dec. 6, Moulding fuel.
 — F., & Harrison, H., 1514, Apr. 26, Artificial fuel.
 — G. A. (Erichsen), 2161, June 20, Valise or knapsack.
 — H., 863, Mar. 11, Paper-pulp.
 — R. W., 107, Jan. 10, Cutting screws.
 Paget, E., & Gibbons, G., 1292, Apr. 8, Collecting and [removing hay, &c.].
 — F. A. (Kalmar), 5, Jan. 1, Magnetic compass cards.
 — F. A. (Schoubersky), 1963, May 31, Railway breaks.
 — F. A. (Béranger), 3953, Dec. 2, Softening, &c. water.
 Pagliari, G. (Johnson), 405, Feb. 3, Liquid fuel.
 Pagnelle de Larret (Gedge), 1907, May 27, Mowing and [reaping, &c.].
 Paillard, A., & Peltier, E. (Henry), 4237, Dec. 24, Boxes [for holding edible substances].
 Paillard, E. A., & Gourlan, Z., 1818, May 20, Opening tins.

- Pain, J., 600, Feb. 18, Rockets, lights, &c. for signals.
 Palliser, Sir W., 1213, Apr. 2, Boots and shoes.
 Palmerant, H., Winborg, J. T., & Ugg, E. (Johnson),
 [1739, May 13, Battery guns.
 Palmer, E. J., 2623, Aug. 4, Ventilating hats.
 — F. A. (Gauze), 2618, Aug. 2, Electro-magnetic
 [engines.
 Palmer, F. I. (Palmer), 2875, Sep. 1, War ships and tor-
 [pedoes.
 — F. I. (Palmer), 2882, Sep. 2, Turret ships.
 Palmer, G. B., 1063, Mar. 21, Ball-valves.
 — J. (Palmer), 2875, Sep. 1, War ships and tor-
 [pedoes.
 — J. (Palmer), 2882, Sep. 2, Turret ships.
 — J. T., & Dixon, R., 3866, Nov. 26, Artificial fuel.
 — R., & Osborne, D. T., 198, Jan. 17, Air-tight
 [stoves.
 — T. N. (Hitchcock), 772, Mar. 4, Railway car-
 [riage ventilators.
 — W. O., 4054, Dec. 9, Wheels and axles.
 Parent, A. I. H., 1589, May 2, Buttons.
 Parisot, F., Guasco, H., & Jourdeuil, P. E. (Abel), 2072,
 [June 11, Decorticating hop bines.
 Parker, A. J., 535, Feb. 13, Printing.
 — J. F., & Wade, A., 3868, Nov. 26, Gas; coke;
 [smelting ores.
 — J. W., & Campbell, W. R., 2352, July 8, Gas-
 [burners.
 — L., 4138, Dec. 16, Steam-engine governors.
 — W., & Samson, P., 4175, Dec. 19, Safety-valves.
 Parker-Rhodes, C. E., 173, Jan. 16, Illuminating clocks, &c.
 Parkes, A., 1736, May 13, Metallic alloys.
 — A., 2151, June 19, Metallic alloys.
 — J., 1890, Sep. 2, Window-sash fasteners.
 — S. & T., 3691, Nov. 13, Forks.
 — T. & S., 3691, Nov. 13, Forks.
 Parkinson, C., 1075, Mar. 22, Beaming or warping ma-
 [chines.
 — J. H., 2183, June 23, Looms.
 — R., & Sharp, C. H., 2117, June 16, Washing-
 [machines.
 Parkyn, J. (Lake), 396, Feb. 1, Treating middlings.
 Parly, W., 768, Mar. 3, Gas-retorts.
 — W., 1496, Apr. 25, Gas.
 Parlour, J. T., 25, Jan. 2, Cabs and other vehicles.
 — J. T., 144, Jan. 14, Wheels for carriages.
 — J. T., 3476, Oct. 25, Registering fares.
 — J. T., 4030, Dec. 6, Armour for ships, &c.
 Parratt, G. F., 469, Feb. 8, Life-rafts.
 Parsell, D., & Williamson, S. S., 1595, May 3, Steam-engines.
 — D., & Williamson, S. S., 1596, May 3, Pumping,
 [ventilating, &c.; motive-power.
 Parsons, C. F., 3746, Nov. 18, Metallic boxes.
 — C. J., & Ingall, W. G., 2191, June 23, Coffin
 [furniture.
 Parsons, F., & Pratt, F. C. (Wise), 2780, Aug. 21,
 [Railway wheels.
 Parsons, T. F., 1511, Apr. 26, Cleaning, &c. tin and
 [other plates.
 Partridge, James, 2234, June 27, Preventing wheels
 [leaving axles.
 — John, 3109, Oct. 2, Holding blinds in any
 [position.
 Parvin, R. C., & Overman, N. (Lake), 2758, Aug. 20,
 [Traction-engines.
 Pashley, G., 1263, Apr. 4, Valves.
 Pasquier, A. (Gedge), 295, Jan. 25, Alarm-clocks.
 — E. (Brewer), 1631, May 6, Drying or stiffening
 [tulle, lace, &c.
 Passavant, P., & Schreiber, W., 3048, Sep. 17, Corks.
 Passieux, M. (Johnson), 1151, Mar. 27, Drawing rollers
 [of mules.
 Pastmore, E. G. (Johnson), 522, Feb. 12, Lawn-mowers.
 Pasteur, L. (Clark), 1106, Mar. 25, Brewing.
 Pastre, A. M. J. (Newton), 2511, July 22, Steam-gene-
 [rators.
 Paterson, James, 365, Jan. 30, Steam-traps.
 — John, & Ritchie, J., 3298, Oct. 11, Fixing
 [capsules on bottles.
 — R., 954, Mar. 15, Collapsible casks.
 Patison, J., 569, Feb. 15, Distilling coal, &c. for products.
 Patrick, J. C., & Tracy, J., 1337, Apr. 12, Envelopes, &c.
 Patterson, J., 3396, Oct. 20, Boring rock, &c.
 Patterson, N. A. (Harris), 2645, Aug. 7, Propelling ships.
 Patterson, R. H., 274, Jan. 23, Purifying coal gas; alka-
 [line sulphides.
 Pattison, F. H., 1650, May 7, War steam-ships.
 Paul, A., 2651, Aug. 7, Steering apparatus.
 — A., 2657, Aug. 8, Winches.
 Pavy, C. J. E. (Clark), 2746, Aug. 19, Granaries, &c.
 Paxman, J. N., 2150, June 19, Feed-water heater.
 — J. N., 3024, Sep. 15, Feed-water heater.
 Payne, A. (Greenwood), 666, Feb. 21, Feeding ma-
 [chinery in making caps, cartridge cases, &c.
 — A. H. (Johnson), 2798, Aug. 26, Brick-making.
 Payne, D., 1691, May 9, Printing-machines.
 — J. B., & Ping, G. J., 3134, Sep. 25, Lace & nets.
 — T., 2224, June 26, Anti-corrosive boiler fluid.
 Payton, W., 621, Feb. 19, Safety and relief valves.
 Peacock, G., 364, Jan. 30, Chain-cables.
 — J. C., & T., 3641, Nov. 8, Gas cooking apparatus.
 — T., & J. C., 3641, Nov. 8, Gas cooking apparatus.
 Péan, L. M. R., 1229, Apr. 3, Spinning tops.
 — L. R. M., 2832, Aug. 28, Spinning tops.
 Pearce, C. C. & F. G., 2556, July 26, Window fasteners.
 — F. J. & C. C., 2556, July 26, Window fasteners.
 Pearl, O., & Battles, J. P. (Johnson), 18, Jan. 1, Spinning.
 Pearce, E. E., 1044, Mar. 20, Glucose or grape sugar.
 Pearson, F. G., & Grinold, J., 3966, Dec. 3, Mannure forks.
 — G., 1416, Apr. 19, Doubling frames.
 — M., 2288, July 2, Fancy or figure weaving.
 — M., 2727, Aug. 18, Looms.
 — T. T., Brickhill, J., & Greaves, H., 2253, June 28,
 [Woven fabrics.
 — W., 3667, Nov. 11, Economising fuel.
 — W., & Harrison, C., 121, Jan. 11, Umbrellas, &c.
 Peck, J. F. (Hughes), 2670, Aug. 11, Berth mattress and
 [life preserver.
 Peebles, D. B., 7, Jan. 1, Gas-regulators.
 Peel, J., & Emsley, S., 3295, Oct. 10, Pickers used in
 [weaving.
 — W., 2321, July 4, Looms.
 Peer, J. A., Lundquist, E., & Rutherford, J., 3847, Nov. 25,
 [Concentrators; separating substances.
 Pegler, A., & Watson, T. J., 2637, Aug. 6, Packing for
 [stuffing-boxes.
 Peile, S., 1923, May 28, Horse hay-rakes.
 Peirce, J. & W. A., 2083, June 12, Window-blind fur-
 [niture.
 — W. A. & J., 2083, June 12, Window-blind fur-
 [niture.
 Pells, S. F., 1495, Apr. 25, School desks.
 Pelouze, E. P., & Audouin, M. E. P. (Clark), 109, Jan. 10,
 [Condensing liquefiable matters.
 Peltier, E., & Paillard, A. (Henry), 4237, Dec. 24,
 [Boxes for holding edible substances.
 Penamaçor, A. de S. A. e C., Condi de, Castro, A. P. de
 [S. e., & Hopcraft, T. S., 2484, July 19,
 [Citric acid; tartaric acid; alcohol.
 Pendred, H. W., 2522, July 23, Regulating action of
 [screw shafts.
 Pengilly, C., 563, Feb. 15, Filters.
 Penn, E. J., & Wall, J., 3776, Nov. 20, Fettling for
 [furnaces.

- Pennett, W., & Bracewell, J., 1117, Mar. 26, Inlaid work, &c.
 Penn-Gaskell, P. (Harris), 3055, Sep. 17, Weighing scales.
 Penrose, W., 2868, Aug. 30, Fuel.
 — W., 3492, Oct. 28, Coke.
 Perch, W., & Higgs, W. P., 3977, Dec. 4, Supplying
 [compressed air for motive-power.
 Pereira, J., July 5, 2333, Preventing fraud on tram-
 [ways, &c.
 Perkins, C. H. (Haseltine), 128, Jan. 11, Rolling metals.
 Perkins, L., & Sterne, L., 3527, Oct. 30, Railway rolling
 [stock.
 Perman, C. H., & Whitaker, R., 194, Jan. 17, Metallic
 [boxes.
 Pernot, C. (Johnson), 2819, Aug. 27, Puddling furnaces.
 — C. (Johnson), 4291, Dec. 31, Puddling iron and
 [steel.
 Pernoud, J. M., & Co., & Delrieu, B. (Clark), 1370, Apr. 16,
 [Preserving substances.
 Perrett, E., 4249, Dec. 27, Floating swimming baths.
 Perrier, J., 1002, Mar. 19, Glass gas chimneys.
 Perrissin, H. & Co. (Gedge), 2194, June 24, Boots and
 [shoes.
 Perroy, T. (Johnson), 3377, Oct. 18, Obtaining fresh
 [water from sea water.
 Perry, J. J., 2920, Sep. 5, Bottle-stoppers.
 — J. J. (Alexander), 2996, Sep. 12, Mechanical toys.
 — J. J., & Wiley, W. E., 3946, Dec. 2, Writing pens.
 Persoz, J. (Thomas), 3603, Nov. 5, Soaps and lubricants.
 — J., & Jeannolle, A. (Thomas), 4196, Dec. 20,
 [Printing ink.
 Peters, C., 3042, Sep. 16, Horse-collars.
 Peterson, C., & Cederholm, H. S., 1394, Apr. 17, Ships' logs.
 Petherick, V., & Rock, J. W., 1364, Apr. 15, Safety-
 [valves.
 Petremant, A. (Le Cerf), 3701, Nov. 14, Dress improvers.
 Petrie, James, 3263, Oct. 8, Steam-engines.
 — James G., 2658, Aug. 8, Preserving food.
 — John, 2272, June 30, Scouring and drying wool, &c.
 Pettifer, C., 395, Feb. 1, Ventilating mines, buildings, &c.
 Pettitt, E., 3754, Nov. 19, Smelting furnaces.
 Petty, J. H., 3749, Nov. 19, Nose-bags.
 Peyer, A. (Inray), 3350, Oct. 16, Clearing steam pipes
 [of water, &c.; regulating temperature of liquids.
 Phelps, G. M., 2430, July 14, Printing telegraphs.
 Phibbs, E. W., 3585, Nov. 4, Preserving milk.
 Philippi, F., 11, Jan. 1, Smelling bottles.
 Phillips, E. G., 2998, Sep. 12, Fire-lighters.
 — G., 821, Mar. 6, Drying and roasting malt,
 [grain, &c.
 — J., 4130, Dec. 16, Pipe-joints.
 — L. D., 4009, Dec. 5, Spittoons.
 — S., & Seward, L. A., 3613, Nov. 6, Teaching
 [music.
 — W., 2069, June 11, Scoring games.
 Phipps, T. L., 2635, Aug. 6, Clipping animals.
 — T. L., 2970, Sep. 10, Clipping animals.
 Piatti, T., & De Mutrécy, C. (Newton), 1834, May 20,
 [Hydraulic-engines.
 Picard, E. Marix, 4094, Dec. 12, Cravats.
 Pickering, E., 3972, Dec. 3, Railways.
 Pickings, G. G., & Hopkins, W., 1745, May 13, Steam
 [pumping machinery.
 Pickles, C. H. & T., & Smithson, S., 2564, July 28,
 [Dyeing fabrics.
 — T. & C. H., & Smithson, S., 2564, July 28,
 [Dyeing fabrics.
 Pickup, A., & Carter, S., 3881, Nov. 27, Sewing-machines.
 — J., 1811, May 19, Steam "Olivers."
 Pickwell, R., Oct. 17, 3364, Kilns.
 Picq, H. (Johnson), 43, Jan. 3, Transmitting power.
 Pidgeon, D., & Manwaring, W., 2203, June 24, Reaping
 [machines.
 Pidgeon, D., & Manwaring, W., 2387, July 10, Har-
 [vesting machines.
 Piggott, A., & Thomas, J., 2107, June 14, Oil lamps.
 Pignel, H., 4176, Dec. 19, Railways and tramways.
 — H., 4253, Dec. 27, Railway signals.
 Pilkington, E., 1776, May 15, Mounting rollers and re-
 [ducing friction.
 — J., 669, Feb. 22, Heating bakers' ovens.
 — S., 3321, Oct. 14, Mules for spinning.
 Pilkington, W. (Fennelly), 3115, Sep. 23, Suspended rail-
 [ways.
 — W. (Fennelly), 3116, Sep. 23, Wheels, axles, &c.
 Pilling, J., Stuart, C., Jagger, W., & Smith, J., 3963,
 [Dec. 3, Safety-valves.
 — W., & Harlow, B., 480, Feb. 10, Stench-traps &
 [grids.
 Pilon, C. C., 637, Feb. 20, Pouches, cases, purses, boxes, &c.
 Pinel, M. P. A., & Lecœur, E. J. J. (Henry), 651, Feb. 20,
 [Preparing fibres for spinning.
 Ping, G. J., & Payne, J. B., 3134, Sep. 25, Lace & nets.
 Pink, R. (Ireland), 263, Jan. 23, Casting ingots for tyres.
 Pinker, J., 481, Feb. 10, Lowering & raising ships' boats.
 Pinnell, J., 1778, May 15, Watering pots or cans.
 Pinney, A., 3903, Nov. 29, Thermometers for ovens.
 Pinti, R., & Warne, S., 903, Mar. 12, Woven fabrics.
 Pintsch, J. (Mewburn), 3101, Sep. 22, Lighting railway
 [carriages.
 Piquemal, J., & Delmas, F., 1459, Apr. 22, Sunshades.
 Pirie, T., 2110, June 14, Breaking up land.
 Pistoresi, A. (Campana), 2105, June 13, Obtaining fibres.
 Pitcher, W., 146, Jan. 14, Craping hair, &c.
 — W., 2723, Aug. 16, Craping hair, &c.
 — W., 3656, Nov. 10, Craping hair, &c.
 Pitt, R., & Cox, S. F., 273, Jan. 23, Leather.
 — T., & Gibbs, G., 284, Jan. 24, Fire-arms.
 Pitts, J., Aldrich, R., & Marble, E. (Johnson), 2932,
 [Sep. 6, Cutting flock.
 Plant, J., & Green, J. R., 3523, Oct. 30, Buttons.
 — W., 3516, Oct. 29, Clipping animals.
 Planté, G. (Clark), 1713, May 10, Lighting lamps, can-
 [dles, &c.
 Plass, C. H. L. (Clark), 3330, Oct. 15, Pianoforte actions.
 Platt, G., 389, Feb. 1, Ornamenting gas fittings, &c.
 — J., & Carrington, W. T. H., 156, Jan. 14, Domestic
 [fire-grates.
 — J., & Tweddell, R. H., 2168, June 21, Rivetting and
 [punching.
 — J., Tweddell, R. H., Wilson, E., & Ashbee, G. H.,
 [2145, June 18, Rivetting girders, &c.
 — W. K., 1658, May 8, Chemical fire-extinguishers.
 Plessner, J. M., 180, Jan. 16, Filling or feeding lamps, &c.
 — J. M., 1604, May 3, Motive-power engines.
 — J. M., 2222, June 26, Inkstands.
 — J. M., 3934, Dec. 1, Motive-power engines.
 Plunkett, R. A., 1789, May 16, Preserving stone, wood, &c.
 Poage, J. N. (Haseltine), 2270, June 30, Watering columns.
 Pohl, O. E., 4, Jan. 1, Salt.
 — O. E., 1503, Apr. 25, Salt.
 Poirier, G., 1426, Apr. 19, Boots and shoes.
 Pole, W., Whicheord, J., & Easton, E., 2149, June 19,
 [Safe and strong-room doors.
 Pollit, J., & Wigzell, E., 1627, May 6, Steam-boilers.
 Pollock, S. S., 2639, Aug. 6, Checking, &c. runaway horses.
 Pomeroy, S. T., 3504, Oct. 28, Finger guard for penholders.
 Pont, E. & L. du (Haseltine), 3273, Oct. 9, Gunpowder.
 — L. & E. du (Haseltine), 3273, Oct. 9, Gunpowder.
 Pont, L. Bopp-du, 2076, June 11, Cooking.
 Poole, A. R., 1462, Apr. 23, Railway points and signals.
 — E. Y., 3623, Nov. 7, Tiles.
 — G. A., 3823, Nov. 22, Indicating depth of water.
 — J., 2478, July 18, Billiard or dining tables, &c.
 Poole, J. M. (Smith), 3933, Dec. 1, Surfacing cylinders, &c.

Poole, W., 1671, May 8, Lamps.
 Pope, A., 3405, Oct. 21, Steam-engines and boilers.
 Pope, F. L. (Lake), 2656, Aug. 7, Railway signals.
 — F. L., & Sawyer, W. H. (Haseltine), 1641, May 7,
 [Separating liquids, &c.; refining liquids; galvanic
 batteries.]
 — J. L. (Lake), 2812, Aug. 26, Screw-threading gas-
 fittings.
 Popping, J. (Lake), 3978, Dec. 4, Welding iron and steel.
 Porter, B., 201, Jan. 17, Pickers for weaving.
 — H., & George, C., 224, Jan. 18, Barometers.
 Portway, C., & Dennis, T. H. P., 2426, July 14, Greenhouses.
 Postle, D. (Thomas), 709, Feb. 26, Producing cold; pre-
 [serving food, &c.]
 Potel, A. P., 1752, May 14, Pipe-joints.
 Poth, H., & Simpson, T., 3431, Oct. 22, Drawers for furniture.
 Potter, H. T., & Lamb, J. G. (Newton), 340, Jan. 28, Spinning.
 Potter, W. E., 1085, Mar. 24, Blind cord fastenings.
 — W. J., & Dearnaley, J., 3511, Oct. 29, Railway chairs.
 Potts, J., 1458, Apr. 22, Railways.
 — J., 3179, Sep. 30, Working, &c. railway points and
 [signals].
 — J., 4081, Dec. 11, Railways.
 Powell, J. W., 1325, Apr. 10, Valves.
 — W., 2193, June 24, Fire-arms.
 Power, H. L., 152, Jan. 14, Umbrellas.
 — W., 4271, Dec. 30, Utilizing waste heat from kilns.
 Powers, T. J. (Haseltine), 3578, Nov. 3, Boxes, cases, &c.
 Prall, W. E. (Lake), 1051, Mar. 20, Supplying loco-
 [motive tenders with water].
 Prangley, O., & Dunn, T. W., 420, Feb. 5, Cleansing wool.
 — O., & Dunn, T. W., 2627, Aug. 5, Cleansing wool.
 Pratt, A. S., 1305, Apr. 9, Ventilating ships' holds, &c.
 Pratt, F. C., & Parsons, F. (Wise), 2780, Aug. 21, Rail-
 [way wheels].
 Pratt, W. T. C., 3914, Nov. 29, Safety apparatus for trains.
 — W. T. C., & Quintavalle, R., 150, Jan. 14, Fixing
 [rudders].
 Preece, W. H., 153, Jan. 14, Railway signals.
 Preston, W. R., & Hamilton, E. C., 2450, July 16, Manure.
 — W. R., Jones, H., & Hamilton, E. C., 187, Jan. 16,
 [Manure].
 Pretty, W., 2786, Aug. 22, Corsets.
 Price, James, & Wigham, J. R., 3198, Oct. 2, Low roof
 [sun lights].
 — John, 3462, Oct. 24, Apparatus for burning fuel.
 — John, Coley, J., & Robson, J. G., 2505, July 22,
 [Puddling furnaces].
 Prince, A. (Flinsch), 446, Feb. 7, Packing tobacco, &c.
 — A. (Flinsch), 461, Feb. 8, Distributing color.
 Pringle, C., & Lee, J. H., 594, Feb. 18, Steam-boilers and
 [engines].
 Printing Machine Co., Bullock (Simon), 958, Mar. 15,
 [Printing].
 Pritchard, G., 106, Jan. 10, Metal tubes and bars.
 — O., 2290, July 2, Kaleidograph for producing
 [designs].
 Procopé, M. (Gilbee), 564, Feb. 15, Nets.
 Proctor, A., & Sanderson, S., 3082, Sep. 19, Economising
 [waste heat].
 Protheroe, P. (Vaughan), 2368, July 8, Motive-power.
 Proudfoot, F. (Lake), 634, Feb. 20, Burning liquid fuel.
 — F. (Lake), 635, Feb. 20, Steam-boilers and
 [furnaces].
 Prouse, R. S., & Duke, H., 366, Jan. 30, Axles & axle-boxes.
 Providence Tool Co. (Haseltine), 3228, Oct. 4, Fire-arms.
 Prud'homme, P. D., Tesse, P., & Lartigue, H. (Clark),
 [490, Feb. 10, Railway signals].
 Pryer, G., & Harvey, J., 3315, Oct. 13, Ballasting ships.
 Puckle, H. J., & Fennelly, R., 245, Jan. 21, Aerial tramways.
 Pullman, J., & Edmonds, J. R., 1242, Apr. 3, Staking and
 [grounding leather].

Pulvermacher, I. L., 1067, Mar. 21, Medico-electricity.
 — I. L., 1969, May 31, Medico-electricity.
 — I. L., 3519, Oct. 29, Medico-electricity.
 Pumphrey, J., 936, Mar. 14, Cinder-sifters.
 Punshon, R., 3061, Sep. 18, Ships' anchors.
 Purdie, J. (Haseltine), 233, Jan. 20, Washers.
 Purnell, J. J., & Gorrill, R., 2850, Aug. 29, Bush and
 [closure for casks, &c.]
 Purves, J., 4146, Dec. 17, Screw-propellers.
 Purvis, G. (Johnson), 733, Feb. 27, Ginning cotton.
 — G. (Johnson), 734, Feb. 27, Ginning cotton.
 Pyroxyline Manufacturing Co., Spooner, D., & Bickford,
 [D., 1170, Mar. 29, Pyroxyline and collodion].

Q.

Quelch, W. B., 141, Jan. 14, Heating and ventilating.
 Quick, John, 1488, Apr. 24, Window-frames and sashes.
 — Joseph, & Restler, J. W., 3383, Oct. 18, Measuring
 [liquids; pumping].
 Quimbel, G. (Imray), 309, Jan. 27, Steam-boilers.
 Quin, J., 580, Feb. 17, India-rubber valves.
 — P., & Nixon, T., 1522, Apr. 26, Sulphate of soda.
 Quinsac, P. J., 2096, June 13, Cartridge boxes.
 Quintavalle, R., & Pratt, W. T. C., 150, Jan. 14, Fixing
 [rudders].

R.

Rackham, J., & Cribb, W., 3326, Oct. 14, Matches.
 Radcliffe, T., 895, Mar. 12, Heating rooms, railway
 [carriages, &c.]
 Radde, W. (Bonneville), 2091, June 13, Conductors for
 [telegraph wires].
 Radeke, W., 1877, May 24, Artificial fuel.
 — W., 4217, Dec. 23, Artificial fuel.
 Rae, A., 1802, May 17, Bathing saloons.
 — M., 2297, July 2, Smelting ores.
 Ragon, A. E., & Walker, J., 3713, Nov. 15, Railway and
 [tramway rails and fastenings].
 Rahles, F., & MacKenzie, J. D., 2562, July 28, Bells.
 Rahtjen, H., 3920, Nov. 29, Anti-fouling composition.
 Raimond, L. F., 987, Mar. 17, Boxes or cases.
 Rainbow, W., & Hemingway, J. (Vaughan), 297, Jan. 25,
 [Railway keys and wedges].
 Rainforth, W. & W., 3660, Nov. 10, Manure & seed drills.
 Ramsay, H. M., 4092, Dec. 12, Treating sewage.
 — T., 3608, Nov. 6, Life-saving hats.
 Ramsden, E. A., & Dawes, W., 3860, Nov. 26, Passenger
 [register].
 — J. & W., 961, Mar. 15, Twisting and doubling
 [yarn, &c.]
 — J. C., 519, Feb. 12, Utilizing furnace gases.
 — J. C., 873, Mar. 11, Combustion of fuel.
 — J. C., 3796, Nov. 21, Generating steam and
 [economising fuel].
 — J. C., 4194, Dec. 20, Card clothing.
 — W. & J., 961, Mar. 15, Twisting and doubling
 [yarn, &c.]
 Ramsey, W., 3994, Dec. 4, Cutting glass.
 Ramspacher, M. F. M. Schmidt- (Clark), 2178, June 21,
 [Tanning, &c.]
 Randell, F. & H., 1998, June 4, Double-furrow ploughs.
 — H. & F., 1998, June 4, Double-furrow ploughs.
 Randolph, A., & Hadwen, J. W., 470, Feb. 8, Spinning.
 Randolph, M., Eichbaum, F. H., & Berry, J. H. (Hunter),
 [2177, June 21, Gas].

- Ransome, J. E., 2659, Aug. 8, Ploughs.
 Raper, J., 1340, Apr. 12, Boring brush head stocks.
 Ratcliff, D. R., 3453, Oct. 24, Tumbler locks.
 Rathbone, J., 3720, Nov. 15, Coupling, &c. railway [carriages].
 Rawle, G., & Evans, W. H., 14, Jan. 1, Leather.
 Raworth, J. S., 869, Mar. 11, Weaving handkerchiefs.
 — J. S., 3411, Oct. 21, Doubling & winding cotton.
 Rawson, C., Sillar, W. C., Slater, J. W., & Wilson, T. S., [2662, Aug. 8, Manure].
 Ray, A. (Heilmann), 1960, May 31, Furnaces.
 — A. (Rousson), 2406, July 12, Siphons for decanting [liquids].
 — A. (Corron & Vignat), 3615, Nov. 6, Dyeing textile [fabrics].
 Ray, B., Jagger, I., & Miner, T. F. (Newton), 2960, Sep. 9, [Blast furnaces].
 Ray, R., Lynde, F. G., & Leeming, T., 46, Jan. 4, Bronzing [and coloring paper, &c.].
 — R. A., 2132, June 17, Removing, &c. incrustation [in steam-boilers].
 Raymond, L., & Henard, A. (Hughes), 3340, Oct. 15, [Expansion and cut-off gear].
 Rayner, E., 1420, Apr. 19, Bung cutting machines.
 Reynolds, C. T., Hidden, T. B., Richardson, L., [Molyneux, E. L., & Rich, A. (Haseltine), 2600, July 31, Preparing and packing water-colors].
 Rayson, R. C., 2708, Aug. 15, Weaving wire gauze.
 Read, T., 4016, Dec. 6, Saddle boilers.
 Reckendorfer, J. (Johnson), 443, Feb. 6, Combined pen- [cil and eraser].
 Redgrave, J., & Wright, D., 223, Jan. 18, Glass vessels.
 Redish, W. B., 4005, Dec. 5, Fire-grates.
 Redman, J. G., 732, Feb. 27, Preventing corrosion of [ships' bottoms, &c.].
 Redmayne, T., 1185, Mar. 31, Fire-grates.
 Ree, W., Dunlop, A., & Stevenson, W., 3248, Oct. 7, [Cutting minerals].
 Reed, E. F., Fletcher, J. W., & Whidden, J. D. (Lake), [2779, Aug. 21, Production of light].
 Reed, J. H., 1052, Mar. 21, Pegging boots and shoes.
 Rees, I., & Walters, H., 3497, Oct. 28, Pickling tin-plates.
 Reeve, W. G., 1921, May 28, Inkstands.
 Reeves, F. J., 770, Mar. 4, Washing fabrics and roots.
 Reichenbach, O., 1334, Apr. 10, Tipping wagons.
 Reid, J., 2471, Oct. 25, Signalling in railway trains.
 Reidy, J., 848, Mar. 10, Pickaxes.
 Reinemer, W., Stemler, G. (Wirth), 2320, July 4, Wash- [ing-machines].
 Remington, E., & Sons (Remington), 1465, Apr. 23, Fire- [arms].
 — J. (Griffin), 1594, May 2, Ploughs, &c.; dis- [tributing manure].
 Remington, S. (Remington & Sons), 1465, Apr. 23, Fire- [arms].
 Remmett, C. T., 860, Mar. 10, Coal-scuttles.
 Renaudon, O. D., 3887, Nov. 27, Asphalte tiles or slabs.
 Rendel, G. W., 1149, Mar. 27, Working ordnance.
 — G. W., 1425, Apr. 19, Mounting and working [ordnance].
 — G. W., 3882, Nov. 27, Mounting ordnance.
 Render, F., 3815, Nov. 22, Heating feed-water and con- [densing steam].
 Renshaw, G. P., 2692, Aug. 13, Valve-gear.
 Restler, J. W., & Quick, J., 3383, Oct. 18, Measuring [liquids; pumping].
 Revell, J., 3709, Nov. 14, Footsteps & bearings; lubricating.
 Rewse, R., 2095, June 13, Motive-power.
 Reynolds, A., & Askew, C., 3403, Oct. 21, Raising sunken [vessels].
 — J. & J. H., 489, Feb. 10, Guiding railway [engines, &c.].
 Reynolds, J. H. & J., 489, Feb. 10, Guiding railway en- [gines, &c.].
 — S., 2405, July 12, Connectors for harness, &c.
 — T., 3729, Nov. 17, Washing-machines.
 Reynoso, A. F. C. (Hunt), 799, Mar. 5, Iodine.
 — A. F. C. (Hunt), 2582, July 30, Preserving food.
 — A. F. C. (Hunt), 3717, Nov. 15, Extracting [iodine].
 — A. F. C. (Hunt), 4290, Dec. 31, Nutritive hy- [gienic compounds].
 Rhoades, G. W., 1571, May 1, Carriage couplings.
 — G. W., & Barrett, J., 1694, May 10, Locking, [&c. railway carriage and other doors].
 Rhode Island Horse-shoe Co. (Lake), 4210, Dec. 23, [Horse-shoes].
 — (Lake), 4263, Dec. 29, [Rolling metals].
 Rhodes, C. E. Parker, 173, Jan. 16, Illuminating clocks, &c.
 — E. & J., & Frankland, W., 1436, Apr. 21, Con- [suming smoke and economising fuel].
 — J. & E., & Frankland, W., 1436, Apr. 21, Con- [suming smoke and economising fuel].
 — J. A., 3517, Oct. 29, Ornamenting metallic sur- [faces].
 — J. H., 382, Jan. 31, Liqueur stands.
 — S. G., & Miller, J., 1756, May 14, Tobacco-pipes [and cigar-holders].
 — W. H., Wain, J., & Thompson, J., 4246, Dec. 26, [Spinning and doubling].
 Rice, J., 3216, Oct. 4, Vessel for beer and other liquids.
 Rich, A., Reynolds, C. T., Hidden, T. B., Richardson, L., [Molyneux, E. L. (Haseltine), 2600, July 31, Preparing and packing water-colors].
 Richard, E. O., 3484, Oct. 27, Railway breaks and coup- [lings].
 Richards, E., 4068, Dec. 10, Railway chairs.
 Richards, I. P. (Howell), 3274, Oct. 9, Punches.
 — J., Wait, G. W., Shapley, E. C., & Jones, C. F. [(Johnson), 3745, Nov. 18, Controlling [draught, &c. in locomotives].
 Richards, P., Mott, C. F. & H. H., & Howes, J., 2593, [July 31, Raising, &c. window-blinds].
 — W., 518, Feb. 12, Charging and drawing retorts.
 — W., 1681, May 9, Pipes.
 — W. A., 2895, Sep. 3, Casting steel.
 Richardson, E. P. (Morgan-Brown), 1111, Mar. 26, Hy- [draulic hose].
 Richardson, G., & Rowbotham, S., 684, Feb. 24, Artificial [marble, &c.; leather; paints].
 — G. W., 3011, Sep. 13, Ventilating & pumping.
 — H. M., 3010, Sep. 13, Looms.
 — J., 2535, July 25, Revolving closet & ash pan.
 — J., 4136, Dec. 16, Portable engines.
 — J., 4150, Dec. 17, Vertical boilers.
 — J., & Watson, J., 370, Jan. 30, Furnaces.
 — J. J., 2424, July 14, Hackle, gill, &c. pins and [teeth].
 — J. T. H., 676, Feb. 22, Glass tumblers, gob- [lets, &c.].
 Richardson, L., Molyneux, E. L., Rich, A., Reynolds, [C. T., & Hidden, T. B. (Haseltine), 2600, July 31, Preparing and packing water-colors].
 Richardson, R. B., 3283, Oct. 10, Puddling furnace-doors.
 — W. H., & Sellers, C., 1155, Mar. 28, Stoves.
 Richmond, John, J. & T., 2146, June 19, Printing-presses.
 — Joshua, T. & J., 2146, June 19, Printing- [presses].
 — T. J., & J., 2146, June 19, Printing-presses.
 — T. & W., & Dodgeon, J., 2252, June 28, Damp- [ing warp].
 — W., 2551, July 26, Chaff-cutters.

- Richmond, W. & T., & Dodgeon, J., 2252, June 28, Damp-
[ing warp.]
Rickard, S., & Foster, E., 616, Feb. 19, Domestic fire-
[places.]
Rickards, J. B., 1399, Apr. 17, Cleansing & bleaching fibres.
— J. B., 1460, Apr. 22, Cleansing & bleaching fibres.
Ricketts, F. H., & Jenkin, F., 1886, May 24, V pulleys.
— J., & Lutschauig, A., 1895, May 26, Obtaining
[high temperatures.]
Ricketts, P. de P. (Haseltine), 4070, Dec. 10, Separating tin.
Ridley, M., & Humphries, E., 1935, May 29, Thrashing-
[machines.]
Rieter, H., Wehrli, J., & Groebli, I. (Barlow), 4278,
[Dec. 30, Embroidering-machines.]
Rigby, J. M., 879, Mar. 11, Drill heads for rock boring, &c.
Righter, C. (Turner), 3043, Sep. 16, India-rubber hose
[and fabrics.]
Riley, E., & Henley, W. T., 254, Jan. 22, Puddling furnaces.
— I., 3172, Sep. 30, Chain links or shackles.
Rineck, J. (Johnson), 3051, Sep. 17, Heckling-machines.
Rintoul, S., 2664, Aug. 9, Transmitting motive-power.
Riot, L. M. T., & Roux, P. (Johnson), 1089, Mar. 24,
[Steam-generators.]
— L. M. T., & Roux, P. (Wise), 2135, June 18, Steam-
[generators.]
Ripamonti, D. & L. (Morgan-Brown), 1423, Apr. 19,
[Barometers.]
— L. & D. (Morgan-Brown), 1423, Apr. 19,
[Barometers.]
Ripley, F., 3740, Nov. 18, Spinning and doubling.
Rippin, E. C., & Emmens, S. H., 2108, June 14, Railway
[signals and points.]
Risque, E. D., 1939, May 29, Bottles and stoppers.
Ritchell, C. F. (Lake), 558, Feb. 14, Drilling and boring.
Ritchie, C., 3227, Oct. 4, Utilising heat for cooking, &c.
— G., 3149, Sep. 26, Portable summerhouses.
— J., & Paterson, J., 3298, Oct. 11, Fixing capsules
[on bottles.]
— W., 584, Feb. 17, Screw-presses.
Riviere, H., 3625, Nov. 7, Making wire articles.
Robbins, E., 2116, June 16, Cements, plastic compounds, &c.
Roberts, B., 1700, May 10, Decks of ships.
— C., 1121, Mar. 26, Destroying parasites; disin-
[fecting, &c.]
Roberts, C. W. (Sutton), 3016, Sep. 15, Clock-cases.
Roberts, E. A. L., 926, Mar. 14, Explosive compounds.
— John, 2286, July 2, Proofing felt hats.
— John, 3035, Sep. 16, Carriage breaks.
— Joseph T., 3552, Nov. 1, Fire-arms.
— L., 94, Jan. 9, Railway rails.
— M. J., 1169, Mar. 29, Foundations for anvils, &c.
— R., 1857, May 22, Emery.
— S., & Berry, S., 4119, Dec. 15, Carding-engines.
Robertson, G. S., 1937, May 29, Life-boats.
— H., 2399, July 11, Saddles.
— James, 448, Feb. 7, Motive-power; blowing
[engines; meters.]
Robertson, James M. (McGrigor), 2147, June 19, Hy-
[draulic cements.]
— John, 248, Jan. 21, Forcing, exhausting, &c.
[fluids and liquids.]
— John, 708, Feb. 26, Generating and applying
[heat.]
— John, 2881, Sep. 2, Registering fares, &c.
— John, 3445, Oct. 23, Compressing air for
[heating apparatus in finishing fabrics.]
— R. A., & Watson, W. R., 974, Mar. 17, Fil-
[tering saccharine solutions, &c.]
— S., 2684, Aug. 13, Dredging, excavating, and
[elevating.]
— W., Orchar, J. G., Muir, M. A., & Mellwham,
[J., 3427, Oct. 22, Winding yarns.]
- Robey, C., Banks, E., Forester, T., & De Bettignies
[Bros., 970, Mar. 15, Kilns.]
— J., 230, Jan. 20, Purifying, disinfecting, &c.
— J., 2534, July 25, Treating sewage.
— J., & Chantrell, G. F., 957, Mar. 15, Filtering
[and deodorising.]
Robin, T., & Malo, L. (Johnson), 3275, Oct. 9, Asphalte
[pavements.]
Robinson, A. H., 2713, Aug. 15, Water-meters.
— A. H., 3850, Nov. 26, Water-meters.
— E., & Lyon, H., 1529, Apr. 28, Indicating
[contents of gasometers, &c., and warning of
[rise and fall of waters.]
— E. S. (Howlett & Onderdonk), 2973, Sep. 10,
[Paper bags.]
— J., 2404, July 12, Charging, &c. retorts, ovens,
[and furnaces.]
— J., & Smith, J., 673, Feb. 22, Sawing wood.
— J., & Smith, J., 3165, Sep. 29, Cutting bungs
[or shives.]
— J., & Somerville, J., 2453, July 16, Discharg-
[ing gas retorts.]
Robinson, J. S., Mackenzie, G. N., & Morris, G. W.
[(Benson), 3697, Nov. 13, Oil-gas.]
— T., 2655, Aug. 7, Raising woollen cloths.
— T., & Hargreaves, J., 680, Feb. 22, Sulphates
[of soda and potassa.]
— T., & Hargreaves, J., 764, Mar. 3, Soda and
[potassa.]
— T., & Hargreaves, J., 828, Mar. 7, Sulphates
[of soda and potassa; chlorine.]
Robinson, T., & Lister, A., 3218, Oct. 4, Shuttles.
— W., 67, Jan. 6, Railway signals.
— W., 1708, May 10, Removing tin from scraps
[ofterne plates.]
— W., & Ward, S., 4168, Dec. 19, Clearers for
[fibrous materials.]
Robson, H. R., 2098, June 13, Steam-engine governors.
— J. G., Price, J., & Coley, J., 2505, July 22,
[Puddling furnaces.]
— T., 4224, Dec. 23, Reaping-machines.
Rocheblave, L. (Gedge), 1118, Mar. 26, Spinning.
Rochford, J., 1433, Apr. 21, Spring safety-valves.
Rochussen, T. A. (Daelen), 562, Feb. 15, Iron and steel.
Rock, J. W., & Petherick, V., 1364, Apr. 15, Safety-valves.
Roddie, J., 460, Feb. 8, Chimney cowls.
Rodier, L. C., & Bates, F. G. (Hughes), 1467, Apr. 23,
[Fire-arms.]
Roebuck, T., & Lamb, J. W., 2863, Aug. 30, Ventilators.
Roettger, E., & Wattinne, H. (Brookes), 1357, Apr. 15,
[Pile fabrics.]
Roettger, W. C. A. (Johnson), 3208, Oct. 3, Artificial fuel.
Rogé, H. N., & Baffoy, P. H. (Clark), 237, Jan. 20, Rail-
[way switches and points.]
Rogers, B. W., 3645, Nov. 8, Screws.
— Henry (Mullholland), 2945, Sep. 8, Cut nails.
— Horace, & Turton, W., 129, Jan. 13, Vehicles.
— J. B., 491, Feb. 10, Rockets and similar signals.
— J. E., 3158, Sep. 27, Working valves of steam
[pumps, &c.]
— J. H., & Morewood, E., 3125, Sep. 24, Coating
[metals.]
— J. H., & Morewood, E., 3126, Sep. 24, Coating
[metals.]
— J. H., & Morewood, E., 4242, Dec. 24, Coating
[tin andterne plates.]
— S. A., & Lee, R. B., 190, Jan. 17, Telegraph posts,
[pillars, &c.]
Rogerson, W. B. (Whight), 1573, May 1, Railway car-
[riages.]
— W. B. (Whight), 2432, July 15, Railway rails
[and spikes.]

Rogerson, W. B. (Whight), 2433, July 15, Furnace grate-bars.
 — W. B. (Whight), 3543, Oct. 31, Railway carriages.
 Rolin, E., 605, Feb. 18, Weighing-machines.
 Rollason, A., 1610, May 5, Floorcloths, waterproof fabrics, &c., varnish and cement.
 — G. R., & Turner, R., 2747, Aug. 20, Counter-acting weight of chandeliers.
 Roman, H., 4177, Dec. 19, Boxes for domestic articles.
 Romanes, J., 2833, Aug. 28, Capsules.
 Rome, J., 2250, June 28, Actuating slide-valves.
 Ronald, B., & Farmer, J., 1676, May 9, Waterclosets and cisterns.
 Rooke, A., 3549, Oct. 31, Tube stoppers.
 Roper, R., 1560, Apr. 30, Captain's bridge as a life-raft.
 Rosa, W. Van V., Hitchcock, R., & Sigourney, J. M. (Johnson), 356, Jan. 29, Lamps.
 — W. Van V., Hitchcock, R., & Sigourney, J. M. (Johnson), 3212, Oct. 3, Lamps.
 Rose, H. C., 255, Jan. 22, Horse-shoes.
 Rose, W. W. (Jewitt), 55, Jan. 4, Toys.
 Rosenfield, A., Mayers, H., Leon, W. F., & Stebins, T., 2057, June 10, Hydraulic hoists.
 Ross, J. (Curtis), 2238, June 27, Sewing boots & shoes.
 — L. E. (Haseltine), 2284, July 2, Looms.
 Ross, O. C. D., 2214, June 25, Vaporized air.
 — W., 3807, Nov. 22, Watercloset cisterns.
 — W., 2148, June 19, Clipping, bottoming, &c. turnips.
 — W. A., 750, Mar. 1, Aerated fluids.
 Roturier, J., 3057, Sep. 18, Life-buoys.
 Roturier, J. (Soul), 101, Jan. 10, Turning leaves of music.
 Roudebush, L. D. (Lake), 4209, Dec. 22, Artificial butter, &c.
 Rourk, J. (Lake), 3553, Nov. 1, Propelling boats, &c.
 Rousseau, A. T., & Stevenot, C. H., 2938, Sep. 6, American organs.
 Rousson, V. (Ray), 2406, July 12, Siphons for decanting liquids.
 Roux, P., & Riot, L. M. T. (Johnson), 1089, Mar. 24, Steam-generators.
 — P., & Riot, L. M. T. (Wise), 2135, June 18, Steam-generators.
 Rovedino, F. L., 1199, Apr. 1, Fire-lighters.
 — F. L., 1490, Apr. 24, Artificial fuel.
 Rowan, D., 3665, Nov. 11, Excavators.
 — T., 2507, July 22, Floorcloths, &c.
 — W., 2233, June 27, Steam-engines and valves.
 Rowat, R., 1661, May 8, Interlacing wire.
 Rowbotham, S., & Richardson, G., 684, Feb. 24, Artificial marble, &c.; leather; paints.
 Rowe, G., 981, Mar. 17, Weaving.
 — S. T., & Johnson, I. C., 2769, Aug. 21, Condensing and rendering harmless noxious fumes.
 Rowett, W., 2077, June 11, Telegraph cables.
 — W., 4079, Dec. 11, Telegraph cables.
 Rowland, E. & G. E., 1839, May 21, Furnace fire-bars.
 — G. E. & E., 1839, May 21, Furnace fire-bars.
 — T. F., 1287, Apr. 8, Charging, &c. gas-retorts.
 Rowlett, W. T., 1655, May 7, Boots and shoes.
 Rowley, J., 853, Mar. 10, Working coal gas tar.
 — J., 3588, Nov. 4, Obtaining coloring matters, &c. from gas waste.
 Roy, E. A., 3374, Oct. 18, Vessels, &c.
 — J., & Weber, J. H., 400, Feb. 3, Umbrellas and parasols.
 — J., & Weber, J. H., 3542, Oct. 31, Umbrellas and parasols.
 Rubery, J., 4193, Dec. 20, Telegraphic wires.
 Rudolph, B., 888, Mar. 12, Sewing-machines.
 Rue, F. A. H. la (Francis), 930, Mar. 14, Separating magnetic from non-magnetic substances.

Rue, F. A. H. la (Francis), 1865, May 23, Treating copper pyrites, &c.
 Rue, W. W. de la, 2571, July 29, Rotating calendars.
 — W. W. de la, & Lancaster, G., 639, Feb. 20, Scoring games.
 Ruggieri, E. F. D. (Newton), 1064, Mar. 21, Fog signals.
 Rushton, T. H., & Tonge, R., 2770, Aug. 21, Spinning and doubling.
 — T. H., Morris, T. S., & Bromiley, W. L., 797, Mar. 5, Spinning.
 Russell, C. (Moore & Williamson), 1556, Apr. 29, Nitrate of soda.
 — J., & Dominy, G., 2492, July 19, Winding and preserving ribbons, &c.
 — J. E. (Bouillon), 2009, June 5, Sewing-machines.
 — J. E. (Bouillon), 3976, Dec. 3, Sewing-machines.
 — R., 3941, Dec. 2, Stoves and kitchen ranges.
 — S., 765, Mar. 3, Stoppering bottles.
 — W., 3747, Nov. 18, Ayrshire bonnets.
 Rust, R. A., & Nicholls, J. F., 1873, May 23, Condensing, &c. milk.
 Ruston, J., 979, Mar. 17, Furnaces.
 Rutenberg, Baron V. de (Murdoch), 360, Jan. 30, Explosive compounds.
 Rutherford, J., Peer, J. A., & Lundquist, E., 3847, Nov. 25, Concentrators; separating substances.
 — W., 3358, Oct. 17, Weaving bags, sacks, &c.
 — W., & Laird, J., 3508, Oct. 29, Weaving bags, sacks, &c.
 Ryder, P., & Brémond, E., 1698, May 10, Preventing collisions on railways.
 Rydill, G., 82, Jan. 8, Drying machines.
 — G., 229, Jan. 20, Dyeing, staining, &c. substances.
 — G., 329, Jan. 28, Steam-boilers, &c.
 — G., 376, Jan. 31, Fuel-economizers, &c.
 — G., 691, Feb. 24, Steam-engines and boilers.
 — G., 2624, Aug. 4, Steam-boilers, furnaces, &c.
 — G., 3567, Nov. 1, Cooking and hot-air stoves.
 — G., 3732, Nov. 17, Steam-boilers and furnaces.
 Rylands, J., 817, Mar. 6, Straightening, measuring and cutting wire, &c.
 Ryle, J. (Young), 2332, July 5, Refrigerators.
 Ryo, A., H. & J., & Emsley, S., 3066, Sep. 18, Twisting fibres in spinning.
 — H., J. & A., & Emsley, S., 3066, Sep. 18, Twisting fibres in spinning.
 — J., A. & H., & Emsley, S., 3066, Sep. 18, Twisting fibres in spinning.

S.

Sadler, W., 883, Mar. 12, Propelling carriages on tramways.
 Sage, W. J., 2667, Aug. 9, Pens.
 St. Ange, Guerriero A. Comte de (Touaillon), 2184, June 23, Horse-shoes.
 Saint Anne, J. (Henderson), 3959, Dec. 3, Match-boxes.
 St. John, W. H., 2527, July 24, Purifying gas.
 Saldanha Albuquerque e Castro, A. de Condi de Pena-maçon, & Castro, P. de S. e, Hopcraft, T. S., 2484, July 19, Citric acid, tartaric acid; alcohol.
 Sale, H. B., & Martin, A., 3893, Nov. 28, Marking or stamping paper, &c.
 Salisbury, H., 3394, Oct. 20, Washing & drying straw plait.
 Salleron, J., 509, Feb. 11, Corks.
 Salmon, P., 147, Jan. 14, Gas, gas-engines, boilers, &c.
 — P., 2419, July 14, Gas, gas-engines, boilers, &c.
 Samain, P., 1944, May 29, Fire-arms.
 Sambrook, W., 596, Feb. 18, Heating feed-water.
 Sampson, S., 1097, Mar. 25, Printing & numbering machine.

- Samson, P., & Parker, W., 4175, Dec. 19, Safety-valves.
 Samuel, M., 3627, Nov. 7, Furniture.
 ——— S. (Stewart), 3979, Dec. 4, Washing fibres.
 Samuelson, S. A., 2186, June 23, Steam-engines.
 Sande e Castro, A. P. de, Hopcraft, T. S., & Castro, A.
 [de S. A. e Condi de Penamacôr, 2484, July 19,
 [Citric acid, tartaric acid; alcohol.
 Sanders, F. (Sanders), 625, Feb. 19, Communicating in
 [trains; warming railway carriages.
 ——— G. N. & G. N., 2139, June 18, Spikes, pins, bolts,
 [nails, &c.
 Sanders, R. D. (Sanders), 625, Feb. 19, Communicating
 [in trains; warming railway carriages.
 Sanderson, J., W. A. & R., 3546, Oct. 31, Steam and other
 [boilers.
 ——— R., J. & W. A., 3546, Oct. 31, Steam and other
 [boilers.
 ——— S., & Proctor, A., 3082, Sep. 19, Economising
 [waste heat.
 ——— W. A., R. & J., 3546, Oct. 31, Steam and other
 [boilers.
 Sandheim, D. O., 3141, Sep. 26, Dress fastenings and
 [ornaments.
 Sandford, W., 2626, Aug. 5, Spinning.
 Sands, J. I., 3145, Sep. 26, Carriage wheels.
 Sandy, J. H., 2053, June 10, Galvanic-batteries.
 Sargent, C. G. (Barlow), 2314, July 4, Washing and dye-
 [ing fibres.
 ——— J. B. (Hughes), 2595, July 31, Door calls or bells.
 ——— J. B. (Hughes), 2683, Aug. 13, Applying castors.
 Sarjeant, E., 3355, Oct. 16, Dressing metallic hinges.
 Sarkissian & Alminana, Société, & Giaroff, A. H. (Gedge),
 [4121, Dec. 15, Embroidering & braiding.
 Sartoris, H., Farinaux, I., Fichaux, A., & Girol, O. (Boyd),
 [2951, Sep. 8, Furnaces and fire-places.
 Sault, J., 2504, July 22, Spreading silk.
 Saumery, N. de (Davies), 2847, Aug. 29, Festooned
 [edging or trimming.
 ——— N. de (Clark), 3835, Nov. 24, Festooned edg-
 [ing or trimming.
 Saunders, J., 4118, Dec. 15, Picture-frames.
 Saunders, J. E., & Knowles, C. B. (Lake), 719, Feb. 26,
 [Regulating blast of locomotives.
 Saunders, W., 3602, Nov. 5, Letter-press printing.
 Sauret, L., 887, Mar. 12, Advertising.
 Sauvée, A. (Zouboff & Grounere), 1497, Apr. 25, Exca-
 [vating, &c.
 Savage, F., 1457, Apr. 22, Traction engines & locomotives.
 ——— F., 1730, May 12, Agricultural steam-engines.
 ——— W. P., 1534, Apr. 28, Paving.
 Savignon, L. A. Auteuil de (Henry), 667, Feb. 21, Sugar.
 Saville, T., Morton, J., & Greenwood, G., 568, Feb. 15,
 [Heating rooms, &c.
 Sawyer, A. F., Loryea, A. M., & Backus, O. J., 217,
 [Jan. 18, Motive-power.
 Sawyer, L. L., & Buckley, C. (Hughes), 1017, Mar. 19,
 [Curtain fixtures.
 ——— W. E., & Smith, J. G. (Clark), 3317, Oct. 13,
 [Electric-telegraphs.
 ——— W. H., & Pope, F. L. (Haseltine), 1641, May 7,
 [Separating liquids, &c.; refining liquids; gal-
 [vanic batteries.
 Sax, J. K. (Simonds & Dyer), 3120, Sep. 24, Railway
 [carriage wheels.
 Sayer, R. C., 982, Mar. 17, Coupling, &c. railway trucks.
 Scattergood, J., 2561, July 28, Railway spikes.
 Schaal, E. (Wirth), 3489, Oct. 27, Preventing shipwrecks.
 Schacher, C., & Feret, L., 2809, Aug. 26, Furnaces.
 Schalla, J. (Wirth), 2992, Sep. 11, Railway carriage
 [couplings.
 Schallehn, H. (Stamer), 1902, May 27, Furnaces.
 Scharr, J., 2859, Aug. 30, Wool washing and steeping.
 Scheidecker, C. (Vaughan), 661, Feb. 21, Shearing
 [animals.
 Scheliha, Col. von (Bousfield), 1585, May 2, Torpedoes.
 Scheller & Berchtold (Wirth), 2380, July 10, Steam-
 [engines.
 Schench, E. Bart., & Hayek (Bonneville), 310, Jan. 27,
 [Artificial stone.
 ——— E. Bart., & Maurer, W. (Bonneville), 914, Mar. 13,
 [Governors.
 ——— E. Bart., & Maurer, W. (Bonneville), 2966, Sep.
 [10, Governors.
 Schlemmer, A. von (Wirth), 3294, Oct. 10, Drying malt.
 Schlesinger, J., 1813, May 19, Pipes and cigar-holders.
 ——— W. J. (Dixon), 464, Feb. 8, Stoning raisins.
 ——— W. J. (Grout), 465, Feb. 8, Combination
 [tool.
 ——— W. J. (Grout), 2312, July 3, Tap for draw-
 [ing champagne, &c.
 ——— W. J. (Cramp), 2679, Aug. 12, Toys.
 Schlösser & Camozzi (Morgan-Brown), 1246, Apr. 3,
 [Verifying positions of rails of rail and tramways.
 Schmid, A. (Johnson), 4071, Dec. 10, Oscillating cylinder
 [engines.
 Schmidt, F. T., 2376, July 9, Weaving.
 Schmidt, H. (Steinhoff), 88, Jan. 8, Marking timber, &c.
 Schmidt, J., 1916, May 28, Tramway rails and wheels.
 Schmidt-Rampacher, M. F. M. (Clark), 2178, June 21,
 [Tanning, &c.
 Schoevers, A. T. C., 84, Jan. 8, Trusses for hernia.
 Schofield, J., & Mellor, W., 546, Feb. 13, Smoothing,
 [&c. fabrics.
 Scholefield, R., 170, Jan. 15, Brick-making.
 Scholes, J., Seymour, T., & Harwood, R. & G., 2452, July 16,
 [Steam-boiler flues.
 Schoof, W. G., 3617, Nov. 6, Lever escapements.
 Schoubersky, C. (Pugot), 1963, May 31, Railway breaks.
 Schpakowsky, A. (Hoffmark), 2359, July 8, Driving belts.
 Schreiber, W., & Passavant, P., 3048, Sep. 17, Corks.
 Schroeter, N. W., 3582, Nov. 4, Railway couplings and
 [buffers.
 Schulzer, O. & Co. (Defries), 4213, Dec. 23, Chimneys
 [for lighthouse lamps.
 Schwarz, L., 2218, June 26, Economising fuel.
 Schwarzenbach, V., 208, Jan. 18, Gilding on glass.
 Scollay, G. W., 1815, May 19, Preserving food.
 Seott, F., & Darlington, F. A., 3636, Nov. 8, Charging, &c.
 [gas-retorts.
 ——— G. A. (Florence Manufacturing Co.), 2831, Aug. 28,
 [Brushes.
 ——— G. L., 1833, May 20, Cupola and blast furnaces.
 ——— G. L., & Heys, W. E., 3912, Nov. 29, Cupola and
 [blast furnaces.
 ——— H. P., 1986, June 3, Anti-corrosive and protective
 [composition.
 ——— H. Y. D., 154, Jan. 14, Treating sewage.
 ——— H. Y. D., 183, Jan. 16, Purifying coal gas.
 ——— H. Y. D., 296, Jan. 25, Obtaining fertilising sub-
 [stances.
 ——— H. Y. D., 570, Feb. 15, Deodorising excreta;
 [manure.
 ——— H. Y. D., 1445, Apr. 21, Treating sewage, &c. for
 [manures.
 ——— H. Y. D., 1509, Apr. 25, Treating sewage, &c.
 ——— H. Y. D., 3505, Oct. 28, Lime and brick kilns, &c.
 ——— H. Y. D., 3742, Nov. 18, Purifying sewage water.
 ——— H. Y. D., 4099, Dec. 12, Cement.
 ——— James, 4190, Dec. 20, Hydraulic lift.
 ——— James, & Shepherd, W. H., 554, Feb. 14, Comb-
 [ing fibres.
 ——— James, & Shepherd, W. H., 969, Mar. 15, Comb-
 [ing fibres.
 ——— John, & Mirfield, M., 423, Feb. 5, Combing fibres.

- Scott, John, & Mirfield, M., 1726, May 12, Combing fibres.
 — John, & Mirfield, M., 2082, June 12, Combing fibres.
 — John, & Mirfield, M., 4233, Dec. 24, Combing fibres.
 — John W., 4041, Dec. 8, Buttons for boots, &c.
 — T. A., 3087, Sep. 20, Washing-machines.
 — Walter, & Matthews, W. J., 138, Jan. 13, Fire-arms.
 — Walter, & Bruno, A. E., 3079, Sep. 19, Backsight
 [for fire-arms.
 — William Macargur, 1925, May 28, Spinning tobacco.
 — William Middleditch, 1268, Apr. 5, Fire-arms.
 — William Middleditch, 3756, Nov. 19, Fire-arms.
 Scruton, T. K., 3722, Nov. 15, Hat-boxes.
 Seal, C. E., & Brooks, E. F. (Clark), 2759, Aug. 20,
 [Gas and water regulators.
 Searle, H., & Eskrett, C., 1391, Apr. 17, Envelopes used
 [in extracting oil, &c.
 — H., & Eskrett, C., 1792, May 16, Envelopes used
 [in extracting oil, &c.
 Sears, H. B., 349, Jan. 29, Dressing stone.
 Seville, C. F. (Gray), 1054, Mar. 21, Paving-blocks.
 Sèches, E., 3503, Oct. 28, Harmoniums.
 Sedgwick, H. D. (Lake), 2049, June 9, Engraving and
 [chasing.
 Sedgwick, R., & Lake, H. H., 1132, Mar. 27, Preventing
 [fraud by omnibus conductors, &c.
 Seegers, L., 2599, July 31, Gas economiser, &c.
 — L., 3441, Oct. 23, Gas, and economising &c. same.
 Seeling, H. (Lake), 79, Jan. 8, Thread spools.
 Seiferheld, A. (Deregnacourt), 103, Jan. 10, Boots & shoes.
 Seilern, H. Count von (Morgan-Brown), 1057, Mar. 21,
 [Locks.
 Seitz, C. D. G., 197, Jan. 17, Paper-making.
 Sell, E. E. J., 3288, Oct. 10, Taking photographs at night.
 Sellers, Charles, & Richardson, W. H., 1155, Mar. 28,
 [Stoves.
 Sellers, Coleman & W. (Johnson), 2461, July 16, Steam
 [boiler injectors.
 — G. H. & W. (Johnson), 2060, June 10, Rolling mills.
 — G. H. & W. (Johnson), 2982, Sep. 11, Puddling
 [furnaces.
 Sellers, R., & Darling, W., 572, Feb. 15, Cleaning, &c.
 [teeth of wheels and racks.
 — W., 4046, Dec. 8, Lawn-mowers.
 Sellers, W. & C. (Johnson), 2461, July 16, Steam-boiler
 [injectors.
 — W. & G. H. (Johnson), 2060, June 10, Rolling mills.
 — W. & G. H. (Johnson), 2982, Sep. 11, Puddling
 [furnaces.
 Sellman, R. J., 3467, Oct. 25, Lotion for horses.
 Semple, D., 3861, Nov. 26, Violins.
 Semple, M. H. (Lake), 2837, Aug. 28, Trimming edges
 [of books; cutting paper.
 Sénéchal, E., 2928, Sep. 5, Dress and figure improvers.
 Senior, B., & Kelly, G., 3397, Oct. 20, Spinning.
 — G. A., & Firth, J., 4182, Dec. 19, Fluid-valves.
 Seward, L. A., & Phillips, S., 3613, Nov. 6, Teaching music.
 Seymour, T., Harwood, R. & G., & Scholes, J., 2452,
 [July 16, Steam-boiler flues,
 Shackleton, J., Naylor, J., Crabtree, W., & Bottomley, W. H.,
 [4162, Dec. 18, Looms.
 Shakespear, J. D., 655, Feb. 21, Harmoniums, organs, &c.
 — T., & Illston, G., 3015, Sep. 15, Sewing-
 [machines.
 Shand, G., 1993, June 3, Preserving textile materials.
 Shanks, James, & Thyne, J., 2869, Aug. 30, Steam-
 [boilers.
 — John, 199, Jan. 17, Water-supplying.
 — John, 2021, June 6, Valves and water-waste pre-
 [venters.
 Shapley, E. C., Jones, C. F., Richards, J., & Wait, G. W.
 [(Johnson), 3745, Nov. 18, Controlling
 [draught, &c. in locomotives.
 Sharer, T., & Betteley, J. H., 238, Jan. 20, Railway rolling
 [stock.
 Sharp, C. H., & Parkinson, R., 2117, June 16, Washing-
 [machines.
 — J. P., 429, Feb. 5, Steel.
 — T. B., & Muntz, P. A., 2843, Aug. 28, Condensing
 [and collecting fumes.
 — T. B., & Muntz, P. A., 3741, Nov. 18, Steam-boiler
 [tubes.
 Sharpe, T. H., 1197, Apr. 1, Moulding plastic substances.
 Sharples, H., 4169, Dec. 19, Locking railway switches.
 Shaw, E., & Hunter, G., 1145, Mar. 27, Steam-boilers.
 — James, & Johnson, G., 1372, Apr. 16, Steam-engines.
 — John, 455, Feb. 7, Heating; exhausting steam.
 — John, 597, Feb. 18, Punching and shearing.
 — R., 1324, Apr. 10, Driving spindles used in spin-
 [ning, &c.
 — S., Sleath, J. S., & Holt, J., 2596, July 31, Pre-
 [paring fibres for spinning, &c.
 Shaw, T. (Hammond), 1652, May 7, Lowering boats.
 Shaw, W., 1377, Apr. 16, Bricks, &c.
 — W., 1298, Apr. 8, Printing.
 Shearman, H. F. (Montgomery), 620, Feb. 19, Journal-
 [boxes.
 Shedd, D. (Lake), 473, Feb. 8, Heating steam-boilers.
 — D. (Bousfield), 2641, Aug. 6, Sewing-machines.
 — W. (Fay), 1101, Mar. 25, Treating fibres.
 Sheehan, T., 3202, Oct. 2, Steelifying iron.
 Sheldon, C. B. (Clark), 1746, May 13, Furniture casters.
 Sheldon, J., 4018, Dec. 6, Felt hats.
 Shell, T., 2628, Aug. 5, Motive-power engines.
 Shelmerdine, T., 2007, June 5, Ballot polling stations.
 Shepard, F. M. (Newton), 3864, Nov. 26, Waterproof
 [boots, &c.
 Shepherd, J., 1849, May 21, Steam-boilers.
 — J., 2356, July 8, Gas-retorts, sanitary tubes, &c.
 — M., 711, Feb. 26, Fire-places.
 — W. H., & Scott, J., 554, Feb. 14, Combing
 [fibres.
 — W. H., & Scott, J., 969, Mar. 15, Combing
 [fibres.
 Sheppard, C., 4267, Dec. 29, Washing and purifying coal.
 Sherman, J. E., 3323, Oct. 14, Converters and blast fur-
 [naces.
 — J. E., 3324, Oct. 14, Iron.
 Shill, R. E., & Moy, T., 1005, Mar. 19, Steam-boilers and
 [engines.
 Shillington, T. F., & Musgrave, J., 2749, Aug. 20, Stoves.
 Sholl, C., 525, Feb. 12, Atmospheric hammers.
 Shorland, G. L., 3909, Nov. 29, Fire-grates.
 Shorrocks, J. L., 3332, Oct. 15, Washing fabrics; dyeing, &c.
 Shriver, W. (Tinsley), 2443, July 15, Self-feeding copy-
 [ing brush.
 Shuttleworth, James, & Laycock, T., 1078, Mar. 24, Sew-
 [ing machine spools, &c.
 — Joseph, 1125, Mar. 26, Steam-boilers and
 [furnaces.
 — Joseph, & Clayton, N., 1358, Apr. 15, Ex-
 [pansion gear.
 — Joseph, & Clayton, N., 1914, May 28, Thrash-
 [ing-machines.
 Sibert, J., 2612, Aug. 1, Heating water.
 Sibley, J., & Horner, F. & W. W., 4252, Dec. 27, Bottles.
 Sicard, L. E. A., 3829, Nov. 24, Preserving food.
 Siddons, W. T., 508, Feb. 11, Preventing overwinding of
 [mine skips.
 Sidgreaves, T. W., 3513, Oct. 29, Sewing-machines.
 Sieber, C. H., 1317, Apr. 9, Removing incrustation from
 [steam-boilers.
 Siemens, C. W., 4075, Dec. 11, Iron and steel.
 — C. W. (Siemens & Altenack), 2006, June 5, Elec-
 [tric-light.

- Siemens, C. W. (*Siemens & Altmann*), 2225, June 27, Electric-telegraphs.
- C. W. (*Siemens*), 2246, June 28, Caloric-engines.
- Siemens, F. (*Siemens*), 2246, June 28, Caloric-engines.
- G., & De Groussilliers, H. (Abel), 2838, Aug. 28, [Soda and potash.
- W., & Altmann, F. von H. (*Siemens*), 2006, [June 5, Electric-light.
- W., & Altmann, F. von H. (*Siemens*), 2225, [June 27, Electric-telegraphs.
- Sigl, G. (Wirth), 1978, May 31, Propelling tramway carriages.
- G. (Wirth), 4026, Dec. 6, Tramway ropes and carriages.
- Sigourney, J. M., Rosa, W. Van V., & Hitchcock, R. (Johnson), 356, Jan. 29, Lamps.
- J. M., Rosa, W. Van V., & Hitchcock, R. (Johnson), 3212, Oct. 3, Lamps.
- Silber, A. M., 334, Jan. 28, Lighting and heating.
- A. M., 1304, Apr. 9, Wick burners.
- A. M., 2427, July 14, Gas-burners.
- A. M., & Farquhar, J. F. C., 3291, Oct. 10, Lamps [and lanterns.
- Sillar, W. C., Slater, J. W., Wilson, T. S., & Rawson, C., [2662, Aug. 8, Manure.
- Silver, T., 1219, Apr. 2, Air-rarefying lamp burner.
- T., 3180, Sep. 30, Air-rarefying lamp burner.
- Sim, R., & Morgan, A., 1215, Apr. 2, Varnish.
- R., & Anderson, J., 2735, Aug. 18, Knitting-machinery.
- Sim, T. (Mills), 3763, Nov. 19, Preserving fibrous materials.
- Simmons, G. A., 652, Feb. 20, Barometers.
- S., 2926, Sep. 5, Hats.
- S., 3839, Nov. 25, Ventilating hats.
- Simon, A., & Cluzet, W., 3299, Oct. 11, Rules for drawing.
- C., 2251, June 28, Mixing machines.
- H. (Büttner), 412, Feb. 4, Tubular boilers.
- H. (Meinicke), 1231, Apr. 3, Wire tramways.
- L. (Bullock Printing Machine Co.), 958, Mar. 15, [Printing.
- W. G., 1848, May 21, Motive-power.
- Simonds, W. E., & Dyer, W. H. (*Sax*), 3120, Sep. 24, [Railway carriage wheels.
- Simons, J. F. N. B., & Nicols, A., 3884, Nov. 27, [serving substances.
- Simpkin, J., & Tweedy, J., 3996, Dec. 4, Locking signals [and points.
- Simpson, A., 2025, June 6, Cattle-food.
- E. T., & Hurd, F., 2594, July 31, Motive-power [generator, &c.
- G., 767, Mar. 3, Cutting or getting minerals.
- J., 1949, May 29, Steam-engines; supplying [water to steam-boilers.
- J. A. & W., 2361, July 8, Fuel.
- J. A. & W., 4184, Dec. 19, Fuel.
- T., & Poth, H., 3431, Oct. 22, Drawers for furniture.
- W. & J. A., 2361, July 8, Fuel.
- W. & J. A., 4184, Dec. 19, Fuel.
- Sinclair, G., 3693, Nov. 13, Steam generators; heating [water, &c.
- Sinclair, T. R. (Newton), 2572, July 29, Filtering; [washing clothes, &c.
- Singer, I. M., 1183, Mar. 31, Cinder and ash receptacle.
- Single, W., 2942, Sep. 6, Locking railway switches.
- Singleton, T., 2244, June 28, Preparing yarns for textile [fabrics.
- T., 4244, Dec. 26, Preparing yarns for textile [fabrics.
- T., Lomax, H., Bradbury, G. F., & Chadwick, T., [1823, May 20, Sewing-machines.
- Singleton, T., Lomax, H., Bradbury, G. F., & Chadwick, T., [3499, Oct. 28, Sewing-machines.
- Sington, A. (*Meunier*), 1889, May 26, Cop-tubes.
- Sipriot, C., 479, Feb. 10, Exhibiting advertisements.
- Sirtaine, G., 2485, July 19, Cleansing wool, &c.
- Sisson, H., 1888, May 26, Stopping leaky boiler tubes.
- Sival, F., 4207, Dec. 22, Lace.
- Skaife, T., Gillett, W., & Bland, C., 4141, Dec. 17, Bell [musical instruments and bells.
- Skelton, T. A., 1487, Apr. 24, Street lanterns.
- W., & Mobberley, W., 1647, May 7, Furnaces.
- Skidmore, W. H., 2801, Aug. 26, Railway buffer & coupling.
- Skinner, G., 4293, Dec. 31, Extension ladders.
- G., & Morris, T. S., 394, Feb. 1, Furniture casters.
- H. E., 810, Mar. 6, Preventing accidents on rail-ways.
- Skoines, H., 846, Mar. 8, Gas; treating gas residues.
- H., 1086, Mar. 24, Gas.
- H., 2262, June 30, Charcoal, black paints, &c.
- Slagg, C., 3911, Nov. 29, Portable hearth boxes.
- Slater, C., & Dawson, D., 4043, Dec. 8, Dyeing.
- J. W., Wilson, T. S., Rawson, C., & Sillar, W. C., [2662, Aug. 8, Manure.
- Sleep, B., 2777, Aug. 21, Cinder-sifters.
- Sleath, J. S., Holt, J., & Shaw, S., 2596, July 31, Preparing [fibres for spinning, &c.
- Small, J. H. (Lake), 27, Jan. 2, Cleaning horses.
- Smart, J., & Fixter, J. G., 1820, May 20, Stocks & dies.
- Smedley, T., Bradbury, J., & Hall, T., 2986, Sep. 11, [Sheathing ships.
- Smellie, R., & Vance, J., 1194, Apr. 1, Railway signals.
- Smith, Alfred, & Melville, D., 3767, Nov. 20, Treating [wool, &c. for size.
- Arthur, & Field, F., 3942, Dec. 2, Decolorizing [hydrocarbons.
- Austin, H., 23, Jan. 2, Crushing stone, &c.
- B., Stake, J., Tolson, R., Firth, M., & Bradley, C., [951, Mar. 15, Combining fibres.
- C., 1359, Apr. 15, Crossing channels.
- C. E., 1803, May 17, Skelps for making tubes.
- C. J., 1591, May 2, Fire-escapes.
- C. S., 2874, Sep. 1, Suspending pictures & mirrors.
- D., 1079, Mar. 24, Railways.
- Edmund, & Brierley, W., 689, Feb. 24, Water- [gauges; discharging air from boilers, &c.
- Ernest, 3573, Nov. 3, Obtaining sulphur.
- Frank, 1376, Apr. 16, Working railway signal bells.
- Frederick, 1943, May 29, Spinning.
- G., 70, Jan. 7, Ventilating boots, shoes, &c.
- G., 759, Mar. 1, Kilns or ovens.
- G., 906, Mar. 12, Motive-power; raising, &c. fluids; [reducing friction.
- G. H., 755, Mar. 1, Printing on paper, linen, &c.
- Smith, G. T. (Dana), 1120, Mar. 26, Separating bran, [&c. from flour.
- G. T. (Dana), 2274, July 1, Middlings flour.
- Smith, G. W., 3735, Nov. 18, Propelling vessels.
- Henry, 324, Jan. 28, Infants' feeding bottles.
- Henry, 1224, Apr. 2, Ventilating millstones, &c.
- Henry, 2830, Aug. 27, Carving forks.
- Henry, 3301, Oct. 11, Carving forks.
- Henry, 3906, Nov. 29, Candle-holders.
- Henry, & Barton, J., 997, Mar. 18, Lace-making.
- Smith, Henry J. (Haseltine), 351, Jan. 29, Torpedo launches.
- Henry J. (Laviarde), 2501, July 21, Wire cards.
- Hubert E., & Fountain, C., 3809, Nov. 22, Printing.
- Hugh, 2299, July 2, Cartridges.
- James, 3710, Nov. 14, Umbrellas and parasols.
- Smith, James G., & Sawyer, W. E. (Clark), 3317, Oct. 13, [Electric-telegraphs.
- Smith, James H., 2351, July 8, Sewing-machines.
- John, 1336, Apr. 12, Pile fabrics.

- Smith, John, 1879, May 24, Weaving.
 — John, & Robinson, J., 673, Feb. 22, Sawing wood.
 — John, & Robinson, J., 3165, Sep. 29, Cutting bungs
 [or shives.
 — John, & Dowler, T. W., 3580, Nov. 4, Studs and
 [solitaires.
 — John, Pilling, J., Stuart, C., & Jagger, W., 3963,
 [Dec. 3, Safety-valves.
 — John G. (Smith), 2074, June 11, Coin weighing
 [machines.
 Smith, John Y. (Lake), 279, Jan. 23, Railway breaks.
 Smith, L. J. & W., 2019, June 6, Electric time ball appa-
 [ratus.
 — R., 3074, Sep. 19, Decorticating, &c. grains and
 [seeds.
 — R., Stephenson, W., Vere, J., & Capes, B., 4032,
 [Dec. 8, Ships' capstans.
 — Samuel, 4226, Dec. 24, Spinning.
 — Samuel, W., 1478, Apr. 24, Utilising gases from
 [furnaces, &c.
 — Spencer, 352, Jan. 29, Indicating and checking
 [passengers, fares, workmen, &c.
 — T., 3022, Sep. 15, Concrete buildings.
 — T., 3629, Nov. 7, Baskets.
 — T. J. (De Chodzko), 124, Jan. 11, Steam-boilers.
 — T. J. (Tessie du Motay), 328, Jan. 28, Baryta.
 — T. J. (Giffard, Sublet, & Armengaud), 627, Feb. 19,
 [Producing ice and cold.
 — T. J. (Mabille), 804, Mar. 5, Kilns.
 — T. J. (Meyn), 1310, Apr. 9, Steam-boilers; fire-
 [boxes.
 — T. J. (Martin), 1397, Apr. 17, Iron & steel, &c.
 — T. J. (Dewe), 1956, May 30, Economising fuel.
 — T. J. (Tremeschini & Cie.), 2671, Aug. 11, Com-
 [pensator frames for thermometers, &c.
 — T. J. (Storer), 3459, Oct. 24, Lighting gas-jets.
 — T. J. (Poole), 3933, Dec. 1, Surfacing cylinders, &c.
 — W., 1342, Apr. 12, Peat-fuel.
 — W., 2787, Aug. 22, Steam-boilers and furnaces.
 — W., 2964, Sep. 9, Breaking stones, ores, &c.
 — W., 3213, Oct. 4, Indicating movements of rail-
 [way switches, &c.
 — W., 3764, Nov. 19, Looms.
 Smith, W. (Smith), 2074, June 11, Coin weighing ma-
 [chines.
 Smith, W. & L. J., 2019, June 6, Electric time ball
 [apparatus.
 — W.B., & Starley, J., 133, Jan. 13, Sewing-machines.
 — W.B., & Starley, J., 3090, Sep. 20, Sewing-machines.
 — W. F., & Coventry, A., 3878, Nov. 27, Tools for
 [turning, screwing, drilling, &c.
 — W. M., & Spencer, G., 715, Feb. 26, Fire-boxes
 [of boilers.
 — W. M., & Spencer, G., 1045, Mar. 20, Locomotive
 [engines and carriages.
 — W. M., & Spence, G., 1435, Apr. 21, Railway
 [and tramway carriages, &c.
 — W. W., 648, Feb. 20, Working & stowing anchors.
 Smithdale, T., 851, Mar. 10, Auxiliary screw-propellers.
 Smithson, S., & Pickles, T. & C. H., 2564, July 28,
 [Dyeing fabrics.
 Smyth, D. Mc C., 609, Feb. 18, Sewing-machines.
 — J. F., 2728, Aug. 18, Gas-generators.
 — S. R., 1320, Apr. 10, Furnace bars.
 Smythe, R. A., 1866, May 23, Registering tram-car pas-
 [sengers.
 Snakers, G. J. (Murdoch), 1863, May 22, Spinning.
 Snoeck, A., & De Labarre, E. (Hughes), 321, Jan. 27,
 [Threads.
 Snoulten, W. G., & Hurst, J. W., 3217, Oct. 4, Life-rafts.
 Snow, F. J., & Underhill, W. S., 1482, Apr. 24, Pre-
 [venting overwinding in mines, &c.
 Snowball, J., 2553, July 26, Railway signals.
 Snowden, W. H., Dearden, B., Donisthorpe, A. R. & G. E.,
 [Clarke, T. A., 2439, July 15, Mixed yarns.
 Soignie, E. E. de (Brookes), 2730, Aug. 18, Railway and
 [tramway rails.
 Sokolnicki, J., 336, Jan. 28, Lamps.
 Somerville, J., & Robinson, J., 2453, July 16, Discharg-
 [ing gas-retorts.
 Sonnenschein, A., 2616, Aug. 2, School desks.
 Sonntag, A. C., 1112, Mar. 26, Railway platforms.
 Souchard, S. H., 4105, Dec. 13, Lamps.
 Soul, M. A. (Roturier), 101, Jan. 10, Turning leaves of
 [music.
 — M. A. (Courtenay), 2362, July 8, Reefing sails.
 — M. A. (Korwan & Flursheim), 3607, Nov. 6, Self-
 [lighting gas apparatus.
 Southwood, W., & Mathews, F. C., 4002, Dec. 5, Propel-
 [ling ships.
 Sowerbutts, A., 100, Jan. 10, Raising sunken vessels, &c.
 Spagnoletti, C. E., 2401, July 11, Railway signals.
 Spartali, N. D., 1206, Apr. 1, Artificial fuel.
 — N. D., 2712, Aug. 15, Steam-boilers & furnaces.
 — N. D., 2987, Sep. 11, Ships' propellers.
 — N. D., 3197, Oct. 2, Ship-building.
 — N. D., 4090, Dec. 11, Steam-boilers.
 — N. D., 4091, Dec. 11, Steam-boilers.
 Spear, Jacob, 2277, July 1, Flower-pot covers, window-
 [blinds, &c.
 — John, 1808, May 19, Safety-valves.
 Speer, A. (Clark), 2993, Sep. 11, Endless railway or
 [travelling street side walks, &c.
 Speight, A. G., 2397, July 11, Boxes, dredgers, car-
 [tridges, &c.
 Speir, R., 3726, Nov. 15, Treating sugar.
 Spence, J. B., 774, Mar. 4, Generating steam and econo-
 [mizing heat.
 — J. B., & Dunn, P., 3356, Oct. 16, Manure.
 — P., 50, Jan. 4, Treating waste alum liquors.
 — P., 3071, Sep. 18, Treating phosphates of iron &
 [alumina.
 — W. (Girarbon), 1188, Mar. 31, Electric-telegraphs.
 — W. (Zündel), 2210, June 25, Volatile liquid engines.
 Spencer, B., Washington, T., & Oddy, J., 3346, Oct. 16,
 [Washing wool.
 — C.I. (Bull), 2546, July 26, Sleepers and fish-joints.
 — C. M., 3757, Nov. 19, Making screws.
 — G. 893, Mar. 12, Pulley blocks.
 — G. (Buckwell), 2157, June 20, Railway breaks.
 — G., & Smith, W. M., 715, Feb. 26, Fire-boxes of
 [boilers.
 — G., & Smith, W. M., 1045, Mar. 20, Locomotive
 [engines and carriages.
 — G., & Smith, W. M., 1435, Apr. 21, Railway and
 [tramway carriages and trucks.
 — J., & Consterdine, J., 631, Feb. 20, Weighing-
 [machines.
 — J. F., 2326, July 4, Steam-engines.
 — J. F., & Inglis, W., 2325, July 4, Steam-engines.
 — S., & Gilman, A. W., 3056, Sep. 17, Brewing and
 [treating beer.
 — W. H., 1894, May 26, Illuminating gas.
 Spice, R. P., 4178, Dec. 19, Gas.
 — R. P., & Hartley, F. W., 2603, Aug. 1, Carburettors.
 Spill, D., 3650, Nov. 8, Propelling tramway cars.
 Spoug, G. M. & J. O., 2754, Aug. 20, Signalling in trains, &c.
 — J. O., 1618, May 5, Pipes and cigarette-holders.
 — J. O. & G. M., 2754, Aug. 20, Signalling in trains, &c.
 Spooner & Pyroxyline Manufg. Co., & Bickford, D., 1170,
 [Mar. 29, Pyroxyline and collodion.
 Spooner, C. E., 2854, Aug. 29, Locking railway points.
 — G. P., 2512, July 22, Coupling and buffing
 [apparatus.

- Sprague, J. T., 1558, Apr. 29, Measuring electric currents, resistances, &c.
- Sprague, W. (Lake), 1770, May 15, Traction-engines.
- Spratt, H. W., 3793, Nov. 21, Ballot apparatus.
- Sprengel, H., 3189, Oct. 1, Sulphuric acid.
- Spurge, J. (Spurge), 2099, June 13, Paring and slicing [fruit, &c.
- Spurge, R. (Spurge), 2099, June 13, Paring and slicing [fruit, &c.
- Squier, G. L. & H. C. (Lake), 2767, Aug. 21, Hulling [rice, &c.
- H. C. & G. L. (Lake), 2767, Aug. 21, Hulling [rice, &c.
- Stabb, J., 1555, Apr. 30, Sash weights; hanging sashes.
- Stacy, G. (Clark), 2012, June 5, Stone-cutters.
- Stafford, T., 2052, June 10, Lap-machines.
- Staught, D. G. & S., 1964, May 31, Keys of pianos, &c.
- S. & D. G., 1964, May 31, Keys of pianos, &c.
- Stake, J., Tolson, R., Firth, M., Bradley, C., & Smith, B., 1951, Mar. 15, Combing fibres.
- Stamer, J. H. G. (Schallehn), 1902, May 27, Furnaces.
- Stamp, J. T. (Elliot), 788, Mar. 5, Laminating and crushing [bark.
- Standfield, J., & Clark, J. L., 2498, July 19, Hydraulic [apparatus.
- J. E., 992, Mar. 18, Carriages.
- Stanfield, F., 1906, May 27, Preventing fraud in bankers' [cheques, &c.
- Stanford, W. H. C., 4039, Dec. 8, Earthenware pipe-joints.
- Staniland, J. T., 2806, Aug. 26, Corn and other screens.
- Stanley, J., 1485, Apr. 24, Carriage wheels.
- J. M., 628, Feb. 19, Generating, &c. heat in furnaces.
- J. M., 654, Feb. 21, Utilising waste heat in furnaces.
- J. M., 889, Mar. 12, Furnaces.
- J. M., 1948, May 29, Furnaces.
- J. M., 3154, Sep. 27, Injecting fuel in furnaces.
- Stanton, J. W. (Haseltine), 2217, June 26, Extinguishing [fires.
- Stapleton, G., 2402, July 11, Communicating in trains.
- Starkie, J., 593, Feb. 18, Economising fuel in fire-places.
- Starley, J., & Smith, W. B., 133, Jan. 13, Sewing-machines.
- J., & Smith, W. M., 3090, Sep. 20, Sewing-machines.
- Starr, R. B., 3204, Oct. 3, Passenger and fare register.
- R. B., 3583, Nov. 4, Passenger and fare register.
- Stead, J., 249, Jan. 22, Rotatory-engines.
- J. W., 2130, June 17, Steelyards.
- T., 291, Jan. 24, Washing and wringing machines.
- Stearns, H. C., 2719, Aug. 16, Candlesticks.
- Stearns, J. B., 2870, Sep. 1, Electric-telegraphs.
- J. B., 3879, Nov. 27, Electric-telegraphs.
- Stebins, T., Rosenfield, A., Mayers, H., & Leon, W. F., 2057, June 10, Hydraulic hoists.
- Steel, H. J., & Garland, R. W., 1192, Mar. 31, Domestic [stoves.
- J., 3890, Nov. 28, Railway breaks.
- J., 4110, Dec. 13, Railway breaks.
- Steele, D. S., Condict, N. W., & Stevens, W. J. (Johnson), 3052, Sep. 17, Valves.
- Steen, J., 1626, May 6, Heating feed-water.
- Steer, A., 660, Feb. 21, Stoves and fire-places.
- Steers, W. (Yarrow), 2901, Sep. 3, Oil-gas.
- Steevens, C. J., & Wallis, A., 919, Mar. 13, Feed-water [heaters.
- Stein, S. T., 1333, Apr. 10, Photographic cameras.
- Steinhoff, G. (Schmidt), 88, Jan. 8, Marking timber, &c.
- Stell, S., 111, Jan. 11, Consuming smoke and saving fuel.
- Stenler, G., & Reinemer, W. (Wirth), 2320, July 4, Washing-machines.
- Stenson, R., & Cuff, A. St. G., 1466, Apr. 23, Peat-fuel.
- Stepanoff, S. S. (Artsayooloff), 1254, Apr. 4, Releasing [ships' boats, &c.
- Stephens, J., 2581, July 30, Treating excreta, &c.
- L. A., & Thwaites, R., 97, Jan. 9, Bottles & corks.
- R., Bradley, G. A., & Broughton, R., 649, [Feb. 20, Locking railway signals, &c.
- W. B., 35, Jan. 3, Paints.
- Stephenson, J., & Hodgson, T. & T., 1690, May 9, Shuttles [for weaving.
- W., Vere, J., Capes, B., & Smith, R., 4032, [Dec. 8, Ships' capstans.
- Sterling, W. H., 2022, June 6, Preserving iron.
- Sterne, L., 1825, May 20, Railway carriages.
- L., & Perkins, L., 3527, Oct. 30, Railway rolling [stock.
- Steven, T., & Moore, H., 4156, Dec. 18, Road-making and [paving.
- Stevenot, C. H., & Rousseau, A. T., 2938, Sep. 6, Ameri- [can organs.
- Stevens, E. M., & Gear, A. S. (Lake), 2828, Aug. 27, [Weaving.
- Stevens, J. J. F., 658, Feb. 21, Compensating railway [point rods, &c.
- J. J. F., 3619, Nov. 6, Railway signals.
- L., 216, Jan. 18, Carbonic oxide.
- Stevens, L. (Bousfield), 3575, Nov. 3, Furnaces.
- Stevens, W., 3155, Sep. 27, Boots and shoes.
- Stevens, W. J., Steele, D. S., & Condict, N. W. (Johnson), 3052, Sep. 17, Valves.
- Stevenson, C., 3474, Oct. 25, Evaporating or recovering [furnaces.
- H. H., 1583, May 2, Propelling vessels.
- J. C., 3514, Oct. 29, Consuming smoke and [economising fuel.
- W., Ree, W., & Dunlop, A., 3248, Oct. 7, [Cutting minerals.
- Stewart, G. (Samuel), 3979, Dec. 4, Washing fibres.
- Stewart, James, 1659, May 8, Damping & starching fabrics.
- John, 2206, June 25, Life-buoys.
- Stüdder, J. G., 236, Jan. 20, Water-waste preventers.
- Stiff, W. C., 1544, Apr. 28, Fastenings for hoops or bands.
- W. C., 3846, Nov. 25, Drilling iron and steel.
- Stiles, J. W. (Fairchild), 1060, Mar. 21, Pressure-gauges.
- N. C. (Mills), 3210, Oct. 3, Power-presses.
- Stirling, J., 374, Jan. 31, Railway breaks.
- Stitt, J. C., & McKaig, W. R., 1146, Mar. 27, Floating baths.
- Stobart, W., & Allan, W., 2903, Sep. 3, Weighing.
- Stock, T. G., & Moline, F., 2852, Aug. 29, Filling sugar [casks, &c.
- Stocker, A. R., 702, Feb. 25, Caps & stoppers for bottles, &c.
- A. S., 4199, Dec. 22, Bottles and stoppers.
- Stockman, B. P., & Bennett, J., 3166, Sep. 29, Railway [carriage lamps.
- Stoker, F. W., 2525, July 24, Rails.
- Stone, J., 496, Feb. 11, Furnace flues.
- J. B., 3076, Sep. 19, Miners' safety-lamps.
- Stone, J. H. (Egginton), 4240, Dec. 24, Lamps.
- Stone, R., 723, Feb. 26, Artificial fuel, bricks, &c.
- R., 1261, Apr. 4, Pavements.
- R., 1855, May 22, Railways; rolling stock.
- R., 2677, Aug. 12, Motive-power.
- R., 2678, Aug. 12, Breaking, crushing, grinding, &c.
- R., 2706, Aug. 15, Pick excavator and discharging [elevator.
- R., 2915, Sep. 4, Arches, bridges, floors, &c.
- R., 3143, Sep. 26, Peat-fuel.
- R., 3387, Oct. 18, Artificial fuel, bricks, &c.
- T., 231, Jan. 20, Carding-engines.
- Stone, W. N., Bingham, S. H., & E. B., & Van Allen, G. W. [(Newton), 608, Feb. 18, Printing-presses.
- Stoney, F. G. M., 550, Feb. 14, Sluices or stop-valves.
- Storer, C. (Smith), 3459, Oct. 24, Lighting gas-jets.

Storer, J. J. (Lake), 3070, Sep. 18, Fertilising substances; [preventing escape of odours].
 Storey, E., 3981, Dec. 4, Saving life at sea.
 Storry, A., 478, Feb. 10, Rivetting boots and shoes.
 Strange, A., & Cornish, K. H., 1559, Apr. 30, Spinning.
 ——— L. (Cameron & Frier), 381, Jan. 31, Cotton-presses.
 ——— L., Cameron, J. A., & Frier, J., 904, Mar. 12, [Cotton-presses].
 Stratford, W., 1133, Mar. 27, Furnace grates.
 Strauss, A., 784, Mar. 4, Cigarettes.
 Strickland, J., 984, Mar. 17, Railway and other wheels.
 Strode, W. W., Mackenzie, J., & Williams, E. P. (Hashins), [4192, Dec. 20, Gas-stoves].
 Stroudley, W., & Drummond, D., 6, Jan. 1, Casting metals.
 Stuart, C., Jagger, W., Smith, J., & Pilling, J., 3963, [Dec. 3, Safety-valves].
 Stuart, D., & Vandermeersch, A. H. (Johnson), 155, Jan. 14, [Fire arms].
 ——— T. E., & Eayrs, W. P. (Haseltine), 2354, July 8, [Rotary-engines].
 Stubbs, C., 1034, Mar. 20, Heating brine in making salt.
 ——— C., J. & W., 1613, May 5, Filling sacks.
 ——— F. H., & Cottam, G. H., 910, Mar. 13, Coal cutting.
 ——— John, W., & C., 1613, May 5, Filling sacks.
 ——— Joseph, & Corrigan, J., 2201, June 24, Winding [yarns, &c.].
 ——— Joseph, & Corrigan, J., 3122, Sep. 24, Winding [yarns, &c.].
 ——— W., 1814, May 19, Bricks.
 ——— W., C., & J., 1613, May 5, Filling sacks.
 Studer & Wyss (Haseltine), 3487, Oct. 27, Engines, pumps, [&c.].
 Studer, H., 4062, Dec. 10, Floating breakwaters.
 Sturgeon, J., 2279, July 1, Compressing air.
 Sublet, A., Armengaud, J., & Giffard, P. (Smith), 627, [Feb. 19, Producing ice and cold].
 Suckling, N. J., 918, Mar. 13, Chaff-cutting machines.
 Sudlow, W. E., 272, Jan. 23, Steam-engines.
 Sudworth, S., 3229, Oct. 4, Recording time, steam-press [sure, &c.].
 Suffield, T., 3984, Dec. 4, Foot-warmers.
 Sugden, R., & Hey, J. G., 1276, Apr. 7, Utilising gas-tar [for heating].
 Summers, I., 2822, Aug. 27, Economising fuel.
 Summers, H., & Fraser, H., 1408, Apr. 18, Signalling apparatus.
 Surmon, H. J., 3327, Oct. 14, Gas.
 Sutcliffe, H. & W., 3679, Nov. 12, Syphon valve taps and [lubricators].
 ——— R., 2897, Sep. 3, Heating feed-water; clearing [boiler tubes].
 ——— R., 3132, Sep. 25, Heating feed-water; cleaning [boiler tubes].
 ——— Whiteley, & Clayton, G., 148, Jan. 14, Miners' [safety-lamps].
 ——— Wright & H., 3679, Nov. 12, Syphon valve taps [and lubricators].
 Sutton, C. W., 599, Feb. 18, Removing acidity from ale, [beer, wine, &c.].
 ——— F. T. (Roberts), 3016, Sep. 15, Clock cases.
 ——— J. B., 2315, July 4, Self-acting lubricators.
 Suzanne, P. A. L. (Tongue), 140, Jan. 13, Imitation [school slates, tablets, &c.].
 Swain, M., 4214, Dec. 23, Railway chairs.
 Swain, W. J., & Todd, W. E. (Hunt), 4280, Dec. 31, [Printing-presses].
 Swainson, E. T., & Haydock, G., 1743, May 13, Warp [dressing machines].
 Swan, J., 789, Mar. 5, Motive-power.
 Sweet, A., 2192, June 24, Water-waste preventers.
 ——— A., 3554, Nov. 1, Water-waste preventer, &c.

Swift, R., 1979, June 2, Saddles.
 Swindells, I., & Lancaster, R., 714, Feb. 26, Furnaces.
 ——— I., & Kenyon, H., 2739, Aug. 19, Sulphate of [soda; chlorine; hydrochloric acid; cements].
 ——— I., & Kenyon, H., 4013, Dec. 5, Nitrogen and [oxygen, and their application].
 Swonnell, G. H., 2436, July 15, Heating malt kilns.
 Sylvester, J. J., 3841, Nov. 25, Guiding tools.
 ——— J. J., 4155, Dec. 18, Guiding tools; effecting [parallel motion].
 Symington, R. S., 912, Mar. 13, Treating sewage.
 ——— R. S., 3482, Oct. 27, Indicating changes of [temperature].
 ——— W. W., 1766, May 14, Nets and netting.
 ——— W. W., 3157, Sep. 27, Net machines.

T.

Tabor, J., 2437, July 15, Cooking apparatus.
 Taft, J., & Edwards, J. C., 373, Jan. 30, Cleaning, &c., [fibres].
 Talbot, F. J., 716, Feb. 26, Bending, &c., metal plates.
 Talcott, C. Mc K. (Ayres), 414, Feb. 4, Screws.
 Tall, J. M., 2733, Aug. 18, Concrete buildings.
 Tallerman, D., 1972, May 31, Dishes for facilitating carving.
 Tamet, D. (Gombert), 3854, Nov. 26, Carriages.
 Tamin, J. M. O., 3151, Sep. 26, Purifying sugar, &c.; [manure].
 Tannett, J. T., Craven, J., & Fox, S., 1847, May 21, [Turning, planing, and boring].
 Tardani, G. (De Lungo), 3633, Nov. 7, Soap.
 Tardioli, M., 2910, Sep. 4, Sowing machine.
 Target, J. L. F., 168, Jan. 15, Treating sewage.
 Tasker, H., 472, Feb. 8, Hay and straw elevators.
 ——— H., 3800, Nov. 21, Portable steam and traction-engines.
 ——— W., 746, Feb. 28, Ploughs.
 ——— W., 1253, Apr. 4, Elevators.
 ——— W. (Blakey), 3980, Dec. 4, Pipe-couplings.
 Tatham, G. H., 832, Mar. 8, Railways and rolling stock.
 ——— John, 1908, May 27, Preparing fibres for spinning.
 ——— John, 3743, Nov. 18, Condenser carding-engines.
 ——— Jonas, 3668, Nov. 11, Feeding carding machines.
 ——— W., 4097, Dec. 12, Carding rollers.
 Tatters, W., & Faulkner, J. H., 1392, Apr. 17, Meter taps [and valves].
 Taunton, J. R. C., 4066, Dec. 10, Safes and strong rooms.
 Tavenet, J. E., 1446, Apr. 21, Paints.
 Taylor, A. (Barlow), 1523, Apr. 26, Rifling ordnance.
 Taylor, F. B., 1266, Apr. 4, Sewing-machines.
 ——— James, 4142, Dec. 17, Passenger ships.
 ——— James, Buckley, S., Chadwick, T. H., 430, Feb. 5, [Charging, &c. gas-retorts].
 Taylor, James P. (Mills), 1549, Apr. 29, Repeating ordnance and cartridges.
 ——— James P. (Mills), 2811, Aug. 26, Battery guns.
 Taylor, John, 794, Mar. 5, Steam-generators.
 ——— John, 1438, Apr. 21, Walls and roofs.
 ——— John, 1439, Apr. 21, Roofing tiles.
 ——— John, 2062, June 10, Sights of fire-arms.
 Taylor, John F. (Clark), 1241, Apr. 3, Presses.
 ——— John F. (Clark), 2269, June 30, Breaks.
 Taylor, John W. A., 1087, Mar. 20, Fire-places.
 ——— S., 805, Mar. 5, Constructing, &c. sheet metal [roofing].
 ——— W., & Wilson, H. L., 1182, Mar. 31, Wringing & [mangling machines].
 ——— W., & Newall, T., 1974, May 31, Indicators; preventing fire in mules.
 ——— W., & Armitage, S., 4254, Dec. 27, Safety-lamps.

- Taylor, W., & Kenyon, J. & J. H. 482, Feb. 10, Drying
[yarns and fabrics].
—— W. C., 4021, Dec. 6, Safety-valves.
—— W. J., Bardsley, J. P., Fletcher, R. J., & Gibson, E.,
[866, Mar. 11, Felt hats, &c.]
Telescheff, N. de (Mennons), 2310, July 3, Steam-engines.
Telling, W. A., & Johnson, S., 1807, May 19, Dry gas-
[meters].
Temple, G., 3429, Oct. 22, Pistons.
Tenac, C. L. van, 2347, July 7, Optical instruments.
Tenwick, J., 2722, Aug. 16, Reaping and mowing.
Terry, C. F., & Cocker, S., 664, Feb. 21, Detaching ships'
[boats, suspended weights, locomotives, &c.]
Teske, C. (Clark), 2824, Aug. 27, Watch regulators.
Tesse, P., Lartigue, H., & Prud'homme, P. D. (Clark), 490,
[Feb. 10, Railway signals].
Tesseyman, J., & Howard, E. I. (Haseltine), 2255, June 28,
[Valve-gear].
Tessie du Motay, C. M. (Smith), 328, Jan. 28, Baryta.
Tester, J., 299, Jan. 25, Cutting vegetable substances.
Testud de Beauregard, F. A., Collet, A., & De Lavillasse, P.,
[4166, Dec. 18, Treating sea-weed, &c.]
Teysonniere, A. (Marston & Kleinan), 1670, May 8, Ink
[and inkstands].
—— A. (Newton), 3176, Sep. 30, Dyeing, &c.
[fabrics].
—— A. (Newton), 3814, Nov. 22, Copying inks.
Thackray, C., 1142, Mar. 27, Securing nuts on bolts.
Theaker, H., & Osborn, S., 313, Jan. 27, Forging metals.
Théry, A., 2742, Aug. 19, Purifying feed-water of steam-
[boilers].
Thibault, P. (Johnson), 2296, July 2, Inkstands.
Thiercelin, L., 1500, Apr. 25, Recovering iodine.
Thomas, A., 1244, Apr. 3, Gas-retorts; sealing gaswork
[mains].
—— E. G. P. (Persoz), 3603, Nov. 5, Soaps & lubri-
[cants].
—— E. G. P. (Persoz & Jeannelle), 4196, Dec. 20,
[Printing ink].
—— E. W., & Nightscales, E., 1454, Apr. 22, Water-
[lift and injector].
—— J., & Morris, H. L., 1049, Mar. 20, Finishing metal
[plates].
—— J., & Piggott, A., 2107, June 14, Oil lamps.
—— M., & Gilchrist, W., 507, Feb. 11, Bricks, tiles, &c.
—— R., 3596, Nov. 5, Propelling tugs.
Thomas, R. H. (Thomas), 1755, May 14, Rolling metal.
—— S. T. (Morgan-Brown), 612, Feb. 19, Looms.
Thomas, W., 2883, Sep. 2, Buses for stays and bodices.
—— W. C., 3328, Oct. 15, Railways and transporting
[goods, &c.]
—— W. H., 2480, July 18, Refrigerators.
—— W. H. (Postle), 709, Feb. 26, Producing cold;
[preserving food, &c.]
—— W. U. (Thomas), 1755, May 14, Rolling metal.
Thomason, J., 3195, Oct. 2, Propelling ships.
—— P., 2510, July 22, Carriage axles.
Thomasson, J. L., 4073, Dec. 11, Portable fire-grates.
Thompson, J., Rhodes, W. H., & Wain, J., 4246, Dec. 26,
[Spinning and doubling].
—— J. B., 3849, Nov. 26, Smokeless furnaces.
—— J. R., 1868, May 23, Sex-marking, castrating,
[and tail docking animals].
—— J. W., 2138, June 18, Lining bands for hats, &c.;
[material for upholsterers' use].
—— M. & W., & Hodgson, W., 1842, May 21, Looms.
—— N., 3187, Oct. 1, Bottle-stoppers.
—— N., 3188, Oct. 1, Connecting fire-hose, tubes, &c.
—— N., 3221, Oct. 4, Connecting fire-hose, tubes, &c.
—— R., & Marley, J., 2055, June 10, Coke oven flues.
—— R. F., 4052, Dec. 9, Saws.
—— W., 1532, Apr. 28, White lead.
Thompson, W. & M., & Hodgson, W., 1842, May 21, Looms.
—— W. G., 42, Jan. 3, Extracting oleaginous matters.
Thomson, A., 2816, Aug. 27, Screw steam-ships.
—— B. L., 3957, Dec. 3, Sheathing ships' bottoms.
—— C. (Thomson), 1931, May 29, Elastic beds,
[seats, &c.]
—— E. A., 2757, Aug. 20, Spreading gum, glue, &c.
—— R. W., 775, Mar. 4, Elastic wheel tires.
Thomson, R. W. (Thomson), 1931, May 29, Elastic beds,
[seats, &c.]
Thomson, S., 2460, July 16, Refrigerators.
—— W., 885, Mar. 12, Blocks for hoisting, &c. weights
[and steering ships].
—— Sir W., & Jenkin, F., 2086, June 12, Telegraphic
[apparatus].
Thornalley, J., 739, Feb. 28, Combined brick & tile ma-
[chines].
Thorneloe, J., 402, Feb. 3, Organs and harmoniums.
Thornton, A., J. & J., 3794, Nov. 21, Carding-engines.
—— E., 989, Mar. 17, Kitchen-ranges.
—— John, J., & A., 3794, Nov. 21, Carding-engines.
—— Joseph, J. & A., 3794, Nov. 21, Carding-engines.
Thornycroft, J. L., 3551, Oct. 31, Screw-propellers.
Thorold, W. A. H., 1326, Apr. 10, Disengaging ships'
[boats].
Thorp, H. P., 1173, Mar. 29, Artificial fuel.
Thuillier, F., & Gérard, E. (Clark), 1608, May 3, Casks.
Thurlow, J., 988, Mar. 17, Mules for spinning.
Thwaites, R., & Stephens, L. A., 97, Jan. 9, Bottles & corks.
Thyne, J., & Shanks, J., 2869, Aug. 30, Steam-boilers.
Tickle, R. P., 3806, Nov. 22, Securing stereotype plates.
Ticozzi, Garau & Co. (Lake), 441, Feb. 6, Railway breaks.
Tidcombe, G., 2517, July 23, Paper-making.
Tiffany, J. C., 798, Mar. 5, Making and storing gas.
Tillott, J., 2615, Aug. 2, Drying steam.
Timby, T. R. (Mills), 2127, June 17, Railway carriages.
Timmis, I. A., 1521, Apr. 26, Armour plates and shields.
Tindal, J., 1911, May 28, Finishing cloth.
Tinne, T. F. S., 1419, Apr. 19, Motive-power engines.
Tinsley, T., (Shriver), 2443, July 15, Self-feeding copy-
[ing brush].
Tisdale, W. S. (Lake), 3117, Sep. 23, Peat-fuel.
Tito-Vignolo, J. (Johnson), 1150, Mar. 27, Treating and
[applying fibres].
Tobin, M., 1081, Mar. 24, Ventilating rooms.
Todd, J. C. (Newton), 2821, Aug. 27, Heckling and comb-
[ing fibres].
Todd, L. J., 1389, Apr. 17, Tramway & other locomotives.
—— M., 4056, Dec. 9, Utilizing exhaust steam.
—— R., & Braithwaite, J. C., 348, Jan. 29, Weaving
[carpets].
Todd, W. E., & Swain, W. J. (Hunt), 4280, Dec. 31,
[Printing-presses].
Tolson, R., Firth, M., Bradley, C., Smith, B., & Stake, J.,
[951, Mar. 15, Combining fibres].
—— T. G., 782, Mar. 4, Saving life, &c. at sea.
Tom, W., & Guilfoyle, E., 3347, Oct. 16, Candles.
Tomlin, H., 3538, Oct. 30, Railway crossings.
Tomlinson, R., & Moss, R., 2207, June 25, Looms.
Tommasi, F., 696, Feb. 25, Motive-power.
Tompkins, J., 3235, Oct. 6, Kettles.
Toner, J., 3054, Sep. 17, Soap tablets.
Tonge, R., & Rushton, T. H., 2770, Aug. 21, Spinning
[and doubling].
Tongue, J. G. (Suzanne), 140, Jan. 13, Imitation school
[slates, tablets, &c.]
—— J. G. (Lufbery), 973, Mar. 17, Stop-motions.
—— J. G. (Kastner), 1091, Mar. 24, Musical instru-
[ments].
—— J. G. (Merrill), 2558, July 26, Steam-boilers.
—— J. G. (Merrill), 2560, July 28, Steam-engines
[and pistons].

- Tongue, J. G. (*Du Chastaingt & Marville*), 2668, Aug. 9, [Seats, &c. for advertising.]
 — J. G. (*Vigour*), 3520, Oct. 29, Iron bars for bolts.
 — J. G. (*Buss*), 3712, Nov. 14, Water-meters.
 — J. G. (*Ciampany*), 4101, Dec. 12, Imitating [marble, &c.]
 — W., 670, Feb. 22, Combing fibres.
 — W., 3304, Oct. 11, Combing fibres.
Tool Co., Providence (Haseltine), 3228, Oct. 4, Fire-arms.
 Toone, R., Archer, H. Z., & Hartshorn, E., 1018, Mar. 19, [Lace-making.]
 Tooth, A., 3877, Nov. 27, Treating beer for bottling.
 — W. H. & W. H., 1414, Apr. 18, Fire-bricks, &c.
 Topham, C., 643, Feb. 20, Stoves, fire-places, chimneys [and flues.]
 Toplis, W., 3525, Oct. 30, Braiding fabrics.
 Torr, C. W., & Johnstone, J., 1452, Apr. 22, Furnaces.
 Torrey, S. W., 1913, May 28, Life-rafts.
 — S. W., 2375, July 9, Preserving textile fabrics, &c.
 Toselli, J. B. (*Morgan-Brown*), 1440, Apr. 21, Trans- [mitting motive-power.]
 Touaillon, C. (*Guerriero, A. Comte de St. Ange*), 2184, June 23, Horse-shoes.
 Toulson, B., 2846, Aug. 29, Drying cylinders.
 — J. A. H., & Harmer, T., 335, Jan. 28, Freeing [glass surfaces from carbon, &c.]
 Toussaint, C. L., 3753, Nov. 19, Driving bands or straps.
 — J., 3666, Nov. 11, Casting iron tubes & pipes.
 Towle, J., 3331, Oct. 15, Treating sewage.
 Towlson, J., 1053, Mar. 21, Decorticating and cleaning [grain.]
 Townsend, J., 1967, May 31, Treating sewage, &c.
 — T. C. (*Michel*), 1050, Mar. 20, Lifting per- [manent way of railways, &c.]
 Townsend, W. H. (*Clark*), 2190, June 23, Printing oil [cloth, &c.]
 Tozer, C. W., 3006, Dec. 13, Water-waste preventers.
 Tracy, J., & Patrick, J. C., 1337, Apr. 12, Envelopes.
 Trafford, W., 4137, Dec. 16, Spinning, weighing, &c. fibres.
 Trattles, M., 2181, June 23, Portable fire-places.
 Tremeschini et Cie, *Société* (Smith), 2671, Aug. 11, [Compensator frames for thermometers, &c.]
 Triboulet, L., & Dallemagne, A. J. (*Gedge*), 1143, [Mar. 27, Photographic glasses.]
 Trippe, F. J., 134, Jan. 13, Cutting textile fabrics.
 Trossin, O., 3401, Oct. 21, Lubricant for steam-engines.
 Trottier, J. (*Gedge*), 1299, Apr. 8, Tin and terne plates.
 — J. (*Gedge*), 3045, Sep. 16, Varnishing tin.
 Trueman, H. P., 3893, Nov. 21, Measuring liquids.
 Truesdell, L. E. (*Newton*), 1875, May 23, Stoves for [hydrocarbon oils.]
 Truman, E. T., 3488, Oct. 27, Communicating in trains.
 Trumble, P., 1519, Apr. 26, Artificial fuel & fire-lighters.
 Tuck, E., 2144, June 18, Conservatories, greenhouses, &c.
 Tucker, A., 1527, Apr. 26, Feeding young animals.
 Tucker, T. (*Lake*), 1860, May 22, Boots and shoes.
 Tuddenham, S., 3267, Oct. 9, Carriages.
 Tullis, J. K., 1022, Mar. 19, Dressing leather.
 Turner, Alexander (*Webster & Webster*), 3021, Sep. 15, [Sewing-machines.]
 — Alfred W., & Garey, J. H., 2493, July 19, Steam- [boilers.]
 — Archibald, 3414, Oct. 21, Elastic fabrics.
 — Archibald (*Richter*), 3043, Sep. 16, India-rubber [hose and fabrics.]
 — C., 3727, Nov. 17, Fleshing and frizing skins and [hides.]
 — E., 1011, Mar. 19, Packing for glands.
 — E., & Clarke, T. A. W., 2726, Aug. 16, Packing [for glands.]
 — F. W., 4088, Dec. 11, Air-gas motors.
 — G., 60, Jan. 6, Venetian blinds.
 Turner, G., & Baldwin, J. C., 604, Feb. 18, Preparing, [combing, &c. fibres.]
 — H., & Day, E., 1328, Apr. 10, Steam-boilers.
 — James A., 3147, Sep. 26, Waterproof fabrics.
 — James S., & Farmer, C., 2826, Aug. 27, Litch-pins.
 — Joseph, 1609, May 5, Sheep-shears.
 — Josiah, 2653, Aug. 7, Sewing-machines.
 — Josiah, 3535, Oct. 30, Sewing-machine stand.
 — L., 3786, Nov. 20, Weaving elastic fabrics.
 — L., 4042, Dec. 8, Looms.
 — R., & Rollason, G. R., 2747, Aug. 20, Counter- [acting weight of chandeliers.]
 — W., 2533, July 24, Spinning.
 Turpe, A. (*Newton*), 2202, June 24, Hat pegs or hooks.
 Turton, T., 169, Jan. 15, Hydraulic propellers.
 — W., & Rogers, H., 129, Jan. 13, Vehicles.
 Tweddell, R. H., & Platt, J., 2168, June 21, Rivetting and [punching.]
 — R. H., Wilson, E., Ashbee, G. H., & Platt, J., [2145, June 18, Rivetting girders, &c.]
 Tweedale, E., 2267, June 30, Flyers for roving frames, &c.
 Tweedy, J., & Simpkin, J., 3996, Dec. 4, Locking signals [and points.]
 Twibill, J., 3791, Nov. 21, Steam-boilers & water heaters.
 Twigg, G., 1314, Apr. 9, Shearing and clipping horses.
 Twynam, C. H., 285, Jan. 24, Railway signals.
 Tydeman, B., 1211, Apr. 2, Sashes and frames; hanging [sashes.]
 Tyler, E., 1845, May 21, Railway signals.
 Tylor, A., 907, Mar. 13, Measuring, &c., water; water- [waste preventers.]
 Tyrer, J., 2922, Sep. 5, Buckles.
 Tysoe, C., 2856, Aug. 30, Supplying oil, tar, &c., to [furnaces.]
- U.**
- Uda, M. & M. B. S. (*Newton*), 553, Feb. 14, Extension [ladders.]
 — M. B. S. & M. (*Newton*), 553, Feb. 14, Extension [ladders.]
 Ulery, W. G. (*Johnson*), 1234, Apr. 3, Steam-engines.
 Ullmann, S., 112, Jan. 11, Trousers and suspenders.
 Umbers, E., Fenn, A. G., & Whiteman, W. T., 56, Jan. 4, [Railway signals.]
 Underhay, F. G., & Carter, A. E., 3916, Nov. 29, Water- [waste preventers.]
 Underhill, J., 4116, Dec. 15, Butt hinges.
 — W. S., & Snow, F. J., 1482, Apr. 24, Preventing [overwinding in mines, &c.]
 Unge, E., *Palmerantz, H., & Winborg, J. T.* (*Johnson*), [1739, May 13, Battery guns.]
 Unsworth, J., 3362, Oct. 17, Frillings and trimmings.
 — T., 195, Jan. 17, Doubling machines.
 — T., 3170, Sep. 30, Spinning and doubling.
 Urquhart, D. I., 2382, July 10, Preventing accidents in [mine shafts.]
 Urwin, J., & Carr, W. R., 4288, Dec. 31, Boring machines.
- V.**
- Vacherot, L. A., 1824, May 20, Propellers & ventilators.
 Vafa, C., & T., 3404, Oct. 21, Raising sunken vessels, &c.
 — T., & C., 3404, Oct. 21, Raising sunken vessels, &c.
 Valon, W. A. Mc I., 3005, Sep. 13, Gas.

Van Allen, G. W., Stone, W. N., & Bingham, S. H. & E. B. [Newton], 608, Feb. 18, Printing-presses.
 Van Blarcom, A. L., & Hall, T. S. (Haseltine), 3290, [Oct. 10, Railway signals.
 Vance, J., & Smellie, R., 1194, Apr. 1, Railway signals.
 Van Den Bergh, J., 8, Jan. 1, Harness.
 Vandermeersch, A. H., & Stuart, D. (Johnson), 155, Jan. 14, [Fire-arms.
 Van Laak, L., & Gillespie, J., 1062, Mar. 21, Bungs and [bung inserters.
 Vanloo, P. (Clark), 3998, Dec. 4, Folding chairs, &c.
 Van Loo-Wauters, F. (Hughes), 63, Jan. 6, Towing canal [boats.
 Vanstone, S., & Hollings, A. (Fairbank), 3440, Oct. 23, [Nuts and tubes.
 Van Tenac, C. L., 2347, July 7, Optical instruments.
 Varley, F. H., 2232, June 27, Telegraph signals.
 — F. H., & Furness, E., 2324, July 4, Imparting, or [arresting motion of rotary shafting, &c.
 — F. H., & Holten, S. E., 2446, July 16, Counting, [indicating, and signalling.
 Vassard, A. P., 819, Mar. 6, Artificial fuel.
 Vaughan, E. P. H. (Hemingway & Rainbow), 297, Jan. 25, [Railway keys and wedges.
 — E. P. H. (Scheidecker), 661, Feb. 21, Shearing [animals.
 — E. P. H. (Chapin), 1749, May 14, Looms.
 — E. P. H. (Protheroe), 2368, July 8, Motive- [power.
 — E. P. H. (Lurmann & Aldendorff), 2481, July 19, [Tuyeres.
 — E. P. H. (Bernhard), 3771, Nov. 20, Prevent- [ing incrustation in steam-boilers.
 — E. P. H. (Morse), 4154, Dec. 18, Balloons.
 — H., 3159, Sep. 27, Rim and dead-locks.
 Verbert, E., & Daudenart, L. G. G. (Hughes), 938, [Mar. 14, Baryta and strontia.
 — E., & Daudenart, L. G. G. (Hughes), 939, Mar. 14, [Treating liquors used in scouring wool.
 — E., & Daudenart, L. G. G. (Hughes), 3013, [Sep. 13, Baryta and strontia.
 — E., & Daudenart, L. G. G. (Hughes), 3014, Sep. 13, [Treating liquors used in scouring wool, &c.
 Verdean, E., 3943, Dec. 2, Electric pile.
 Vere, J., Capes, B., Smith, R., & Stephenson, W., 4032, [Dec. 8, Ships' capstans.
 Verity, B. & W., 4096, Dec. 12, Heating conservatories.
 — W. & B., 4096, Dec. 12, Heating conservatories.
 Verran, J., 1747, May 14, Boats.
 Verrier, A. B., 581, Feb. 17, Heating rooms and buildings.
 Viault, J., & Bernier, C. N., 543, Feb. 13, Railway signals.
 Vickers, E. C., 1105, Mar. 25, Substitute for leather.
 — M., 1110, Mar. 26, Motive-power.
 Vignat & Corron (Ray), 3615, Nov. 6, Dyeing textile [fabrics.
 Vignier, E., 1347, Apr. 14, Aërated beverages.
 Vignolo, I. Tito — (Johnson), 1150, Mar. 27, Treating [and applying fibres.
 Vigour, H. (Tongue), 3520, Oct. 29, Iron bars for bolts.
 Vigouroux, P., 3985, Dec. 4, Bituminous materials.
 Viles, J., 1819, May 20, Gloves for cleaning & polishing [plate, &c.
 Villiers, P., & Mayer, J., 2751, Aug. 20, Impregnating air.
 Vimard, L. C., & Milde, C. F. (Newton), 706, Feb. 25, [Electric clocks.
 Vincent, W., 565, Feb. 15, Fuel.
 Voelter, H., & Meijh, O. (Hunt), 1421, Apr. 19, Paper, &c.
 Voigt, F. G., 3185, Oct. 1, Hydrocarbon gas.
 Voisin, E., 3252, Oct. 7, Cupola, furnaces.
 Von Loewis, W. (Abel), 1938, May 29, Breaking and [scutching fibres.
 Von Scheliha, Col. (Bousfield), 1585, May 2, Torpedoes.

Von Schlemmer, A. (Wirth), 3294, Oct. 10, Drying malt.
 Von Seilern, H. Count, (Morgan-Brown), 1057, Mar. 21, [Locks.
 Von Zahony, Baron E. R. (Brewer), 2912, Sep. 4, Paper- [making.
 Vowell, J., & Gibson, G., 289, Jan. 24, Governors.
 Vu, L. F., & Lemerre, L. J. D. (Newton), 2134, June 17, [Railway couplings.
 Vuibert, F. N. C., & Metge, E., 710, Feb. 26, Preserving [meat.

W.

Waddington, H., & Bailey, T. T., 293, Jan. 25, Miners' [safety-lamps.
 Wade, A., & Parker, J. F., 3868, Nov. 26, Gas; coke; [smelting ores.
 Wade, C. A. (Wade), 4272, Dec. 30, Sewing-machines.
 Wade, E. J. (Wade), 4272, Dec. 30, Sewing-machines.
 — J. A., & Cherry, J., 1781, May 15, Pressing plas- [tic substances.
 — J. A., & Cherry, J., 2298, July 2, Tipping carts.
 Wadsworth, J., 841, Mar. 8, Utilizing refuse matter for [fuel and manure.
 — J., 3491, Oct. 27, Warming, ventilating, and [cooking.
 Wahab, C. J., 2673, Aug. 12, Sieves and filters.
 Wahlberg, A. W. (Gilbee), 3799, Nov. 21, Ammonia.
 Wain, J., 1058, Mar. 21, Mules for spinning, &c.
 — J., Thompson, J., & Rhodes, W. H., 4246, Dec. 26, [Spinning and doubling.
 Wainwright, H. H., Wisewell, M. N., & Hurlbut, H. A. [(Johnson), 2840, Aug. 28, Gas.
 Wait, G. W., Shapley, E. C., Jones, C. F., & Richards, J. [(Johnson), 3745, Nov. 18, Controlling draught, &c. [in locomotives.
 Waithman, A., 4044, Dec. 8, Finishing twine.
 Wakefield, J., 814, Mar. 6, Lamps.
 Walden, J. (Cheesebrough), 1453, Apr. 22, Fitting gores [in shoes.
 Waldenburg, L. (Newton), 4151, Dec. 17, Treating diseases.
 Walker, Alfred, 4025, Dec. 6, Hansom-cabs.
 — Andrew, 58, Jan. 6, Steam-boilers.
 — B., 4281, Dec. 31, Lace machines.
 — B. P., & Day, J., 3089, Sep. 20, Blower for [kitchen-ranges.
 — E., & Clarke, W., 4149, Dec. 17, Ships' wind- [lasses.
 — James, 2632, Aug. 6, Lighting cigars and tobacco.
 — John, 4258, Dec. 27, Biscuits.
 — John, & Ragon, A. E., 3713, Nov. 15, Railway [and tramway rails and fastenings.
 — John, S. & W., 3501, Oct. 28, Steam-engines.
 — John B., 1273, Apr. 5, Fuel.
 — John B., 2622, Aug. 2, Fuel.
 — John E., & Cole, J. W., 3276, Oct. 9, Screening [and picking coals.
 — M. (Burnet), 3695, Nov. 13, Ships, boats, &c.
 — N. S., 2456, July 16, Bale-ties or buckles.
 — R., 1525, Apr. 26, Roasting-jack and baster.
 — R. S., 3432, Oct. 22, Compressing artificial fuel.
 — S., W., & J., 3501, Oct. 28, Steam-engines.
 — T., 2568, July 29, Electric apparatus for tele- [graphy, &c.
 — T. J., & Davies, E., 2914, Sep. 4, Heating feed-water.
 — W., 2879, Sep. 2, Treating fibres.
 — W., 3017, Sep. 15, Regulating temperature of [liquids, &c.

- Walker, W., 4048, Dec. 9, Treating peat.
 — W., & Garforth, W. E., 2249, June 28, Steam-
 [pumps].
 — W., J. & S., 3501, Oct. 28, Steam-engines.
 — W. G., 3418, Oct. 21, Spanners.
 — W. T., 4163, Dec. 18, Gas-purifiers.
 Wall, J., & Penn, E. J., 3776, Nov. 20, Fetting for furnaces.
 Wallace, John, & Driver, V., 2909, Sep. 4, Cleaning, &c.
 [table cutlery].
 Wallace, John D. (Newton), 2015, June 5, Electro-
 [magnetic engines].
 Wallace, Joseph, 1539, Apr. 28, Distilling.
 Waller, I., & Fowler, H. (Haseltine), 77, Jan. 8, Hospital
 [beds].
 Wallis, A., & Steevens, C. J., 919, Mar. 13, Feed-water
 [heaters].
 Walmsley, J., 3779, Nov. 20, Self-stopping motion.
 Walpole, J., 125, Jan. 11, Double furrow ploughs.
 Walsh, R., & Barlow, J. R., 713, Feb. 26, Distributing
 [water for extinguishing fire, &c].
 — W. J., 2842, Aug. 28, Lamps.
 Walters, H., & Rees, I., 3497, Oct. 28, Pickling tin plates.
 Walton, W., 337, Jan. 28, Rolling and drawing wire.
 — W., 1683, May 9, Wire cards.
 — W., 3338, Oct. 15, Wire cards.
 Wamain, J. T., Cardon-, 203, Jan. 17, Treating fibres.
 Wanner, J. F., 2431, July 14, Trimmings.
 Wanzer, R. M. (Hall), 2367, July 8, Sewing-machines.
 Ward, E., 1386, Apr. 17, Sewing-machines.
 — G. B., & Lees, T., 2408, July 12, Curling hat brims.
 — John, 1599, May 3, Portland cement.
 Ward, John F. (Johnson), 1001, Mar. 18, Laying pipes
 [across rivers, &c].
 Ward, John P., 683, Feb. 22, Sifting cinders, &c.
 — Joseph, 3472, Oct. 25, Drawing & spinning cotton.
 — S., 3458, Oct. 24, Looped fabrics.
 — S., & Robinson, W., 4168, Dec. 19, Clearers for
 [fibrous materials].
 — W. M., 4283, Dec. 31, Mills for mixing mortar, &c.
 Wardley, C., 3773, Nov. 20, Washing fabrics.
 Ware, A. A. de, 304, Jan. 25, Umbrella & parasol frames.
 Waring, J. T. (Newton), 2743, Aug. 19, Treating fabrics.
 Warmington, L., 3621, Nov. 6, Booterkins and gaiters.
 Warne, S., & Pinti, R., 903, Mar. 12, Woven fabrics.
 Warner, J. W. (Lake), 225, Jan. 18, Fire-proof vaults.
 — J. W. (Lake), 226, Jan. 18, Fire-proof safes.
 Warner, W. R. (Hirsiger), 749, Mar. 1, Railway breaks.
 Warren, C., 3765, Nov. 19, Domestic fire-grates.
 — F. P., 2434, July 15, Cooling railway carriages, &c.
 — F. P., 3495, Oct. 28, Refrigerators.
 — J. B., & Eyland, E. S., 3245, Oct. 7, Turning
 [over leaves of music].
 — W., 2781, Aug. 22, Pumps.
 Warsop, G., & Hill, H. W., 3222, Oct. 4, Cutting coal.
 Warth, A. (Bonneville), 1572, May 1, Piling textile fabrics.
 Washington, T., Oddy, J., & Spencer, B., 3346, Oct. 16,
 [Washing wool].
 Wass, James, 3207, Oct. 3, Velocipedes.
 — John, & Ecroyd, A. R., 1318, Apr. 9, Furnaces.
 Watson, A., 137, Jan. 13, Thrashing machine & elevator.
 — G., Childs, J., & Ditchfield, S. J., 2093, June 13,
 [Heating apparatus; gaseous fuel].
 — G., Childs, J., & Ditchfield, S. J., 4095, Dec. 12,
 [Heating apparatus; gaseous fuel].
 — James, & Davey, S., 1267, Apr. 5, Safety lighters
 [for charges].
 — John, 275, Jan. 23, Tramway points.
 — John, 1217, Apr. 2, Heating conservatories.
 — John, 1893, May 26, Stoves.
 — Joseph, & Richardson, J., 370, Jan. 30, Furnaces.
 — Joseph J. W., 1762, May 14, Railways.
 — P. B., 1472, Apr. 23, Gas-burners.
 Watson, R., & Yates, W. E., 1664, May 8, Washing-
 [machines; churns].
 — T. J., & Pegler, A., 2637, Aug. 6, Packing for
 [stuffing-boxes].
 — W., & Fraser, A. C., 3632, Nov. 7, Treating sewage.
 — W. R., 824, Mar. 7, Fixing tubes of steam-boilers,
 [&c].
 — W. R., & Robertson, R. A., 974, Mar. 17, Fil-
 [tering saccharine solutions, &c].
 Wattinne, H., & Roeltger, E. (Brookes), 1357, Apr. 15,
 [Pile fabrics].
 Wattles, J. W., 166, Jan. 15, Spinning.
 Watts, C. & T. C., 3069, Sep. 18, Lubricating axle-box.
 — T. C. & C., 3069, Sep. 18, Lubricating axle-box.
 — T. H., 692, Feb. 24, Chimneys and ventilators.
 Waugh, J. T. & T. H., 3306, Oct. 11, Spinning and
 [doubling fibres].
 — T. H. & J. T., 3306, Oct. 11, Spinning and
 [doubling fibres].
 Wauters, F. Van Loo- (Hughes), 63, Jan. 6, Towing canal
 [boats].
 Weare, R., 1957, May 30, Dry-closets.
 Weatherby, C. P. N., 3975, Dec. 3, Preserving wood.
 — C. P. N., 4161, Dec. 18, Making ice.
 Weatherdon, B. F., Colborne, Hon. J., & Barrington, F. L.,
 [2462, July 16, Propelling ships].
 Webb, A. E., 728, Feb. 27, Candles and night-lights.
 — F. W., 3748, Nov. 19, Locomotive engines.
 Webber, C. E., & Bolton, F. J., 686, Feb. 24, Obtaining
 [photometric measurements].
 Weber, J. H., & Roy, J., 400, Feb. 3, Umbrellas & parasols.
 — J. H., & Roy, J., 3542, Oct. 31, Umbrellas & parasols.
 — L., 1270, Apr. 5, Galvanic-batteries.
 Webster, G. & J. (Turner), 3021, Sep. 15, Sewing-machines.
 Webster, G. M., 1524, Apr. 26, Stoves.
 — James, 445, Feb. 20, Applying gases to refining,
 [&c. metals].
 Webster, John, & G. (Turner), 3021, Sep. 15, Sewing-
 [machines].
 Webster, W., 2476, July 18, Flat-irons.
 Weed, A., 3680, Nov. 12, Cutting files.
 Weed, A. (Morgan-Brown), 1218, Apr. 2, Cutting files.
 Weekes, C., & Barnard, C., 209, Jan. 18, Fire-lighters.
 Weems, W., 3457, Oct. 24, Lighting and ventilating.
 Wehrli, J., Groebli, L., & Rieter, H. (Barlow), 4278, Dec. 30,
 [Embroidering machines].
 Weichum, G. (Abel), 1685, May 9, Turntables.
 Weigelin, G., 1338, Apr. 12, Drying bricks, wood, linen, &c.
 Weil, F., & Lyte, F. M., 3136, Sep. 25, Coating iron and
 [steel; coppering iron ships].
 Weir, J. G., 2738, Aug. 19, Sewing-machines.
 Weisher, B. (Bonneville), 2092, June 13, Ship-building.
 Welch, E. B., & Anders, G. L. (Hunt), 40, Jan. 3, Print-
 [ing telegraphs].
 Welch, A., 4028, Dec. 6, Feeding, &c. cattle in railway
 [trucks].
 — E. J. C., 51, Jan. 4, Safety-valves.
 — E. J. C., 778, Mar. 4, Telegraph and other posts.
 — J., 3320, Oct. 14, Doubling frames.
 — J., 3388, Dec. 4, Umbrellas.
 — W., 4185, Dec. 19, Metallic bedsteads.
 Weldon, W., 868, Mar. 11, Chlorine.
 — W., 2449, July 16, Absorbing dilute chlorine.
 — W., 3655, Nov. 10, Paper-pulp.
 — W., 3805, Nov. 22, Carbonate of soda.
 Wellby, J. (Johnson), 721, Feb. 26, Railway carriage dust
 [screens].
 Wells, R. G., 219, Jan. 18, Theatrical and scientific ex-
 [hibitions, &c].
 Wells, W. (Lake), 1922, May 28, Generating vapor from
 [bi-sulphide of carbon].
 Werdermann, R., 474, Feb. 10, Reducing & purifying metals.

- Werdermann, R., 476, Feb. 10, Purifying and refining [metals, &c.
 — R., 1933, May 29, Aluminium.
 — R., 1934, May 29, Converting chloride of [sodium into caustic soda.
 West, H., 2654, Aug. 7, Propelling carriages, ploughs, &c.
 — H. J. (Whymper), 2155, June 19, Removing air [from casks and filling same.
 — J., 1255, Apr. 4, Gas.
 — J., 1504, Apr. 25, Purifying gas.
 — J., 3224, Oct. 4, Gas.
 — J., 3225, Oct. 4, Gas.
 — J. F., 4010, Dec. 5, Trellis for training vines, &c.
 — J. H., 1158, Mar. 28, Refrigerating.
 West, S. A., & Goodwin, L. (Lake), 933, Mar. 14, Rotary- [pumps.
 Westcott, J. H. (Newton), 4205, Dec. 22, Chucks.
 Western, C. R., 613, Feb. 19, Band saws.
 — C. R., 2089, June 13, Planing, tonguing, &c. [wood.
 — C. R., & Hamilton, J., 3203, Oct. 3, Band saw [machines.
 Westhorp, T., 1329, Apr. 10, Marine signals.
 Westinghouse, G. (Abel), 1735, May 13, Railway breaks [and signals.
 — G. (Abel), 3840, Nov. 25, Railway breaks.
 Westley, T. & W., 2849, Aug. 29, Sewing-machines.
 — W. & T., 2849, Aug. 29, Sewing-machines.
 Weston, D. McC. (Mirrlees), 1678, May 9, Driving clutch.
 Weston, G., 3706, Nov. 14, Grate or furnace bars.
 — T. A., 960, Mar. 15, Transmitting, &c. motion to [machinery.
 — T. A., 1379, Apr. 16, Raising, lowering, &c. weights.
 — T. A., 3023, Sep. 15, Transmitting, &c. motive [power.
 — T. A., 3455, Oct. 24, Joints for toilet glasses, &c.
 — T. A., 3473, Oct. 25, Raising and lowering heavy [bodies.
 Westwood, J., 3560, Nov. 1, Fire-proof floors.
 Wetherill, J., 2682, Aug. 13, Drying grain, &c.
 Wetzell, C. H. (Wischmeyer), 3020, Sep. 15, Reservoir [penholders.
 Whalley, E., 1984, June 3, Winding yarns or threads.
 Wharldale, W., 327, Jan. 28, Bottle-stoppers.
 Wharton, A., & Lister, T., 688, Feb. 24, Raising liquids.
 Wharton, W. (Johnson), 3133, Sep. 25, Railway switches.
 Wheatley, W. T., 2285, July 2, Fastening tires on wheels.
 Wheeler, C. G., 2503, July 21, Distributing, &c. water [through pipes.
 Wheeler, E. S. (Hughes), 4265, Dec. 29, Horse-shoe ma- [chines.
 Wheeler, G. P., 1843, May 21, Artificial fuel.
 — H. F., & Hodges, S. H., 1380, Apr. 16, Boots [and shoes.
 — J., 2330, July 5, Buttons.
 — J. A., & Bessell, H., 3944, Dec. 2, Palliasses.
 — S., & Jerome, E., 1649, May 7, Paper boxes.
 Whelpley, J. A. (Johnson), 3371, Oct. 18, Skates.
 Whichcord, J., 3040, Sep. 16, Fire-proof buildings.
 — J., & Anderson, W., 2048, June 9, Slabs and [panels for strong-rooms, &c.
 — J., Easton, E., & Pole, W., 2149, June 19, [Safe and strong-room doors.
 Whidden, J. D., Reed, E. F., & Fletcher, J. W. (Lake), [2779, Aug. 21, Production of light.
 Whight, G. (Rogerson), 1573, May 1, Railway carriages.
 — G. (Rogerson), 2432, July 15, Railway rails and [spikes.
 — G. (Rogerson), 2433, July 15, Furnace grate-bars.
 — G. (Rogerson), 3543, Oct. 31, Railway carriages.
 Whipp, J., & Mellor, W. W., 132, Jan. 13, Cutting glass.
 — J., & Mellor, W. W., 2275, July 1, Cutting glass.
 Whiston, W., 3049, Sep. 17, Dyeing and printing fabrics.
 — W., 3121, Sep. 24, Dyeing and printing fabrics.
 Whitaker, M., 4158, Dec. 18, Coupling and reversing gear.
 — R., & Perman, C. H., 194, Jan. 17, Metallic [boxes.
 Whitburn, T., 48, Jan. 4, Printing.
 White, C. M., 928, Mar. 14, Bottle and other stoppers.
 — R., & Atkinson, H., 3260, Oct. 8, Opening, &c. [window-sashes.
 White, T. H., & Knight, E. (Haseltine), 806, Mar. 5, Lamps.
 White, W., 2532, July 24, Treating sewage.
 — W., 3781, Nov. 20, Treating sewage.
 — W., & Larkin, H., 1302, Apr. 8, Iron and steel.
 — W. A. (Lloyd), 3310, Oct. 11, Cleansing and [bleaching fibres, fabrics, paintwork, &c.
 Whitehead, H. W. & T., 2189, June 23, Combing machines.
 — James, 2899, Sep. 3, Spinning and doubling.
 — John, 2187, June 23, Dandy rollers.
 — P. O., 1578, May 1, Damping warps.
 — R. K., 743, Feb. 28, Size.
 — T., 3334, Oct. 15, Treating fibrous substances.
 — T. & H. W., 2189, June 23, Combing ma- [chines.
 Whitehead, W. E., & Atherton, A. T. (Haseltine), 3047, [Sep. 17, Spinning.
 Whitehouse, E. O. W., & Clark, J. L., 4082, Dec. 11, [Recording number of passengers in public [vehicles and distance travelled.
 — W., 2282, July 1, Loading crops into wagons.
 Whiteley, W., 3802, Nov. 21, Spinning.
 Whiteman, W. T., Umbers, E., & Fenn, A. G., 56, Jan. 4, [Railway signals.
 Whitgreave, J. R., 2591, July 31, Ship-building.
 Whiting, G. F., & Bolton, J. C., 39, Jan. 3, Window fasteners.
 Whitley, N., Hoyle, H., & Haigh, J., 1016, Mar. 19, Card [setting machines.
 Whitmarsh, J. L., 2979, Sep. 11, Book-rests.
 Whitmore, W., 1871, May 23, Mounting and driving [millstones.
 Whitney, B. D. (Lake), 1801, May 17, Band saw machines.
 — E. R. (Haseltine), 3064, Sep. 18, Printers' type.
 Whittaker, T., 1798, May 17, Extinguishing fires.
 Whittenbury, J. C. & J. C., 21, Jan. 1, School desks.
 Whithread, W., 3169, Sep. 30, Disinfecting and oxidising.
 Whittle, W., 3983, Dec. 4, Fire-places.
 Whitwell, T., 86, Jan. 8, Fire-places.
 — T., 1288, Apr. 8, Stoves.
 Whitworth, E., 2167, June 20, Reaping-machines.
 — E., 4183, Dec. 19, Reaping-machines.
 — T. S., & Higgins, J., 1874, May 23, Spinning.
 — T. S., & Higgins, J., 2961, Sep. 9, Spinning.
 Whymper, H. (West), 2155, June 19, Removing air from [casks, and filling same.
 Wibberley, J. T., 955, Mar. 15, Winding threads on spools [or reels.
 Wiener, B. (Hoffmark), 3731, Nov. 17, Gunpowder.
 Wier, M. A., 182, Jan. 16, Carriage turnstiles.
 Wigg, C., 1725, May 12, Bleaching powder.
 Wigham, J. R., & Price, J., 3198, Oct. 2, Low roof sun- [lights.
 Wightman, A., 308, Jan. 25, Horse-shoes.
 Wiggell, E., & Pollit, J., 1627, May 6, Steam-boilers.
 Wilcox, S., & Babcock, G. H., 1154, Mar. 27, Steam-boilers.
 — W., 4053, Dec. 9, Cattle-trucks.
 Wilde, H., 618, Feb. 19, Electric-light.
 Wildsmith, J. H. S., 4007, Dec. 5, Artificial manure and [bone.
 Wiles, J. F., 65, Jan. 6, Securing doors of railway carriages.
 Wiley, W. E., 83, Jan. 8, Coating metals.
 — W. E., 3730, Nov. 17, Dress fastenings.
 — W. E., & Perry, J. J., 3946, Dec. 2, Writing pens.
 Wilkins, J., 3569, Nov. 3, Wheels.

- Wilkinson, A., 3088, Sep. 19, Coating telegraph wires & cables.
 — A., 4134, Dec. 16, Polishing compounds.
 — C. H., & Crowther, E., 3593, Nov. 4, Rail & tramway points.
 — F., 2924, Sep. 5, Work indicators used in spinning, &c.
 — F., & Elce, J., 2301, July 2, Spinning.
 — J., & Brook, J., 415, Feb. 4, Carpets.
 — N., & Heyworth, E., 1147, Mar. 27, Steam-boilers.
 — N., & Heyworth, E., 1890, May 26, Steam-boilers.
 — N., & Heyworth, E., 4125, Dec. 15, Steam-boilers.
 — S., 3430, Oct. 22, Relieving pressure in gas-retorts.
 — W. H. (Nichols), 3500, Oct. 28, Nails & spikes.
 Willacy, R., 2198, June 24, Distributing manure, &c.
 Willan, R., Lewis, D., & Briggs, J., 494, Feb. 11, Sizing and dressing machines.
 Willans, J. G., 547, Feb. 14, Iron and steel.
 — J. G., 1990, June 3, Castings.
 — J. G., 3716, Nov. 15, Iron and steel.
 Williams, A. W. C. (Capewell), 64, Jan. 6, Nail extractors.
 — A. W. C. (Ayres), 1024, Mar. 19, Screws.
 — C., 3856, Nov. 26, Propelling vessels.
 — C. D., & Davidson, C., 3286, Oct. 10, Signalling in trains; breaks.
 — E. P., Strobe, W. W., & Mackenzie, J. (Haskins), 4192, Dec. 20, Gas stoves.
 — G. H., 4289, Dec. 31, Horse-collars.
 — H., 268, Jan. 23, Utilizing waste heat from coke ovens.
 — J., 1165, Mar. 28, Feeding sheep, &c.
 Williams, J. J. (Lauth), 3947, Dec. 2, Rolling metals.
 Williams, M., 205, Jan. 17, Gas.
 — M., 1122, Mar. 26, Burning liquid fuel.
 — M., 1869, May 23, Varnishes.
 — O., & Howatson, A., 1812, May 19, Furnaces.
 — P. H., 1773, May 15, Economizing fuel.
 — R. P., 3280, Oct. 9, Railway sleepers.
 — S., 3644, Nov. 8, Box-irons.
 — T. E., 3929, Dec. 1, Extracting gases from furnaces.
 — W. C., & Hobson, A., 2930, Sep. 6, Velocipedes.
 Williamson, C., 3211, Oct. 3, Bustles.
 — D., 2068, June 11, Thinning turnips, &c.
 — R., & Dale, J., 3270, Oct. 9, Collecting, moving, raising, &c. salt.
 — S. S., & Parsell, D., 1595, May 3, Steam-engines.
 — S. S., & Parsell, D., 1596, May 3, Pumping ventilating, &c.; motive-power.
 Williamson, T. R., & Moore, R. (Russell), 1556, Apr. 29, Nitrate of soda.
 Willis, C., 1269, Apr. 5, Heating feed-water.
 Willis, J. W. (Cutter), 1646, May 7, Valves.
 Willis, W., 2011, June 5, Photo-chemical printing.
 Wilmot, S. R. (Newton), 1415, Apr. 18, Metal tubing.
 Wilson, A. F., 2784, Aug. 22, Lighting and extinguishing gas.
 — A. F., 2954, Sep. 8, Coal gas.
 Wilson, C. F., Miller, S. H., & Folk, J. E. (Newton), 19, Jan. 1, Dies.
 — D. H., Johnson, L., & Glanding, J. (Hunt), 1791, May 16, Packing.
 Wilson, E., Ashbee, G., Platt, J., & Tweddell, R. H., 2145, June 18, Rivetting girders, &c.
 — G., 239, Jan. 21, Bending armour plates.
 — G. A., 3237, Oct. 6, Printing-presses.
 — H. L., & Taylor, W., 1182, Mar. 31, Wringing and mangling machines.
 — J., 3958, Dec. 3, Book covers.
 — J. E., 1289, Apr. 8, Constructing and propelling vessels.
 Wilson, J. E., 1290, Apr. 8, Cutting wood.
 — J. Hays, 2120, June 16, Steam-winch.
 — J. Hays, 2509, July 22, Cleaning tubes.
 — J. Henry, 2112, June 14, Tilting casks, &c.
 — P., 2447, July 16, Double drill ploughs.
 — P., & Fear, H., 3689, Nov. 13, Safes.
 — R., 886, Mar. 12, Raising and lowering weights in collieries, &c.
 — R., 3883, Nov. 27, Hydraulic presses and steam-engines.
 — S. W., 1695, May 10, Carriage wheels.
 — S. W., 3531, Oct. 30, Slide-rests and gearing for lathes, &c.
 Wilson, S. W. (Lake), 727, Feb. 27, Roller journal-boxes.
 Wilson, T., 241, Jan. 21, Propelling carriages.
 — T. B., 875, Mar. 11, Salt.
 — T. E., 1235, Apr. 3, Screening & washing sand, &c.
 — T. S., Rawson, C., Sillar, W. C., & Slater, J. W., 2662, Aug. 8, Manure.
 — W. (Eickemeyer), 76, Jan. 7, Hats.
 — W. (Eickemeyer), 487, Feb. 10, Hats.
 — W., & Burch, H., 2392, July 11, Mowing & reaping.
 — W., Burch, H., & Battersby, J., 2687, Aug. 13, Mowing & reaping.
 — W. A., & Duncan, G., 383, Jan. 31, Printing.
 Winans, T. (Johnson), 3820, Nov. 22, Organs.
 — T., & Winans, W. L., 1651, May 7, Steam vessels.
 Winans, W. L., & Winans, T., 1651, May 7, Steam vessels.
 Winborg, J. T., Unge, E., & Palmcrantz, H. (Johnson), 1739, May 13, Battery guns.
 Wincen, H., 2070, June 11, Gas-meters.
 Windhausen, F. (Wirth), 3142, Sep. 26, Cold-producing engines.
 Winn, C., 3004, Sep. 12, Gas-lamps.
 Winslow, J. B., 1019, Mar. 19, Pegging boots and shoes.
 Winter, G. K., 761, Mar. 1, Electric-telegraphs.
 Winterbottom, J., & Nixon, J., 1074, Mar. 22, Rolling cutlery steel, &c.
 Winters, V., McGregor, R., & A., & Minister, R. H. (Clark), 4047, Dec. 8, Hulling maize.
 Wintour, T. F., 2032, June 7, Ventilators.
 Wirth, Francis (Boschan), 3454, Oct. 24, Smoke-consuming furnaces.
 — Frank (Korwan & Flurscheim), 1611, May 5, Self-lighting gas apparatus.
 — Frank (Boschan), 1692, May 9, Promoting combustion of smoke.
 — Frank (Sigl), 1978, May 31, Propelling tramway carriages.
 — Frank (Ohl), 2171, June 21, Turbines.
 — Frank (Reinemer & Stemler), 2320, July 4, Washing machines.
 — Frank (Scheller & Berchtold), 2380, July 10, Steam-engines.
 — Frank (Kernaul), 2494, July 19, Lubricators.
 — Frank (Eichwede), 2660, Aug. 8, Heating railway carriages.
 — Frank (Osenbrück), 2991, Sep. 11, Lubricators.
 — Frank (Schalla), 2992, Sep. 11, Railway carriage couplings.
 — Frank (Windhausen), 3142, Sep. 26, Cold-producing engines.
 — Frank (Beins), 3194, Oct. 2, Carbonic acid and applying same.
 — Frank (Dold), 3285, Oct. 10, Washing yarns.
 — Frank (Von Schlemmer), 3294, Oct. 10, Drying malt.
 — Frank (Schaal), 3489, Oct. 27, Preventing shipwrecks.
 — Frank (Dauthendey), 3842, Nov. 25, Viewing photographs.
 — Frank (André), 3843, Nov. 25, Introducing gas into furnaces.

- Wirth, Frank (*Sigl*), 4026, Dec. 6, Tramway ropes and [carriages].
 — Frank (*Brandt*), 4222, Dec. 23, Railway breaks.
 — Franz (*Asthoewer*), 1135, Mar. 27, Steel rails.
 — Franz (*Dold*), 1332, Apr. 10, Washing yarns.
 — Franz (*Honigmann*), 1864, May 22, Ropes, rods, [&c.; pump plungers.
 Wischmeyer, F. (*Wetzel*), 3020, Sep. 15, Reservoir pen- [holders].
 Wise, W. H., 1098, Mar. 25, Furnaces.
 — W. L. (*McFethries*), 725, Feb. 27, Cutting screw- [threads].
 — W. L. (*Juengling*), 807, Mar. 5, Air-gas.
 — W. L. (*Greindl*), 1252, Apr. 4, Rotary-pumps.
 — W. L. (*Lefebvre*), 1928, May 28, Sowing potatoes.
 — W. L. (*Riot & Roux*), 2135, June 18, Steam-gene- [rators].
 — W. L. (*Eccles & Eccles*), 2661, Aug. 8, Journals [and shaft bearings].
 — W. L. (*Pratt & Parsons*), 2780, Aug. 21, Railway [wheels].
 Wisewell, M. N., Hurlbut, H. A., & Wainwright, H. H. [Johnson], 2840, Aug. 28, Gas.
 Withers, H. H., & Batchelor, J., 2280, July 1, Reaping, [&c.; binding into sheaves.
 Witt, G. de, & Fairman, J. (*Coddington*), 1004, Mar. 19, [Blocks, slabs, pillars, tubes, &c.
 Wittig, R., 339, Jan. 28, Carding-engines.
 Woerteler, E. O. (*Marshall*), 3152, Sep. 27, Reflectors [and shades].
 Wogler, F., & Brasseur, J., 720, Feb. 26, Smoothing glass, [crystal, &c.
 Wolff, A. D. B. (*Newton*), 28, Jan. 2, Transposing key- [board for pianos, &c.
 Wolfram, J. C. A. H., 1245, Apr. 3, Peat-fuel.
 Wolstencroft, T., 1020, Mar. 19, Heating buildings, eco- [nomising fuel, curing smoky chimneys, &c.
 Wolstenholme, R., & Botterill, J. & J., 1744, May 13, [Steam-boilers and hot water-feed.
 Wood, Adam, 1851, May 22, Looms.
 — Andrew, 3821, Nov. 22, Digging and excavating.
 — Arthur, 3479, Oct. 27, Venetian blinds.
 Wood, Aurin (*Hughes*), 3834, Nov. 24, Bolt-cutting.
 Wood, C., 2306, July 3, Bricks.
 — C., 2694, Aug. 14, Iron and steel.
 — C., 3255, Oct. 7, Mortar, cement, and concrete.
 — C. F., 1643, May 7, Rotary engines, pumps & meters.
 — C. H., 3395, Oct. 20, Motive-power.
 — E., 578, Feb. 15, Steam-engines.
 — G., 901, Mar. 12, Furnaces; applying gas for [heating].
 — John, 1023, Mar. 19, Axles and axle-boxes.
 — John, 3026, Sep. 15, Sewing and embroidering.
 — Joseph, 1682, May 9, Looms.
 — Joseph A., Wright, D. P., & Edmunds, H., 1355, [Apr. 15, Lighting and heating.
 — R., 151, Jan. 14, Weaving.
 — R., & Clarke, C. L. (*Harrison*), 1772, May 15, [Feed and low-water signal for steam-boilers.
 — R. J., & Muirhead, L. P., 244, Jan. 21, Speed in- [dicators].
 Wood, S. W. (*Haseltine*), 3537, Oct. 30, Metallic tubing [and leaf].
 Wood, T., & Bowra, M. E., 228, Jan. 20, Elastic fabrics.
 — T., & Howitt, J. K., 3093, Sep. 20, Stable fittings.
 — W., 1262, Apr. 4, Finishing threads.
 Woodacre, W., & Holden, R., 3259, Oct. 8, Looms.
 Woodall, S., 1751, May 14, Coal wagons.
 Woodbury, W. B., 1954, May 30, Photo-mechanical printing.
 Woodcock, F. A., 1119, Mar. 26, India-rubber.
 — Joseph, 2652, Aug. 7, Punching holes in jacquard [cards].
 Woodcock, Joshua, Coulter, J., & Oldroyd, J. & M., 898, [Mar. 12, Dyeing, bleaching, &c. fab- [rics].
 — Joshua, Coulter, J., & Oldroyd, J. & M., 4157, [Dec. 18, Dyeing, bleaching, &c. fabric^s.
 — W., 864, Mar. 11, Stoves and fireplaces.
 Woodley, J., 2579, July 30, Trussing casks.
 — T. G., 1256, Apr. 4, Pipe joints.
 Woodruff, P. T., 773, Mar. 4, Annealing pots & saucers.
 Woods, G., 1547, Apr. 29, Reed organs.
 — J. T., & De Malortie, C. Baron, 1006, Mar. 19, [Furnaces].
 Woolley, J., & Padgett, T., 3348, Oct. 16, Brick-making.
 Woolright, J., 163, Jan. 15, Sash-fasteners.
 Wormald, W., & Dobson, E., 2441, July 15, Sewing-machines.
 Worrall, J., 2365, July 8, Dyeing cloth.
 — J., 3969, Dec. 3, Finishing cut-pile fabrics.
 Worroll, E., 826, Mar. 7, Withdrawing water from steam [pipes].
 — E., 2908, Sep. 4, Withdrawing water from steam [pipes].
 Worsley, G., Brelsford, J., & Ashton, R., 3557, Nov. 1, [Felt hats].
 Worsam, S. W., 4206, Dec. 22, Circular saw benches.
 Worth, James, Fogg, J., Oldham, J., & Bird, J., 2886, Sep. 2, [Stiffening felt hats].
 — John, 753, Mar. 1, Washers and washer cloths.
 — R. J., 3478, Oct. 27, Steam-pumps.
 Worthington, R., 675, Feb. 22, Gathering and tying up [crops].
 — S. K., & Mercer, J., 647, Feb. 20, Looms.
 Wotherspoon, J., 1600, May 3, Asbestos packing.
 — J., 2337, July 5, Closing gas-retort joints.
 — J., & Foulis, W., 2391, July 11, Retort lids.
 — J., & Coey, J., 2575, July 29, Packing [butter].
 Wright, D., & Redgrave, J., 223, Jan. 18, Glass vessels.
 — D. P., Edmonds, H., & Wood, J. A., 1355, Apr. 15, [Lighting and heating].
 — E. G., 2470, July 17, Cutting, &c. brewers' finings.
 — James (*Aublet & Baudot*), 175, Jan. 16, Boots & [shoes].
 — James (*Guillem*), 2778, Aug. 21, Treating zinc [alloys].
 — John, 964, Mar. 15, Consuming smoke & econo- [mising fuel].
 — T., 117, Jan. 11, Jacquard apparatus.
 — W., 823, Mar. 7, Gas.
 — W., 1597, May 3, Gas.
 — W., 2243, June 28, Steam-boilers.
 Wright, W., & Henderson, T. (*Brewer*), 3201, Oct. 2, [Sewing-machines].
 Wulff, J., 2322, July 4, Boot and glove fasteners.
 Wuth, G. J. A. (*Forster*), 4286, Dec. 31, Utilising waste [from print and dye works].
 Wyatt, J., 529, Feb. 13, Railway signals.
 — J., 1973, May 31, Signalling; opening, &c. doors.
 — J., 3955, Dec. 2, Signalling; opening, &c. doors.
 — W., 632, Feb. 20, Corn meters.
 Wyllie, C. C., 2519, July 23, Paper-making.
 Wyse, J., 1733, May 13, Safety-valves.
 Wyss & Studer (*Haseltine*), 3487, Oct. 27, Engines, pumps, [&c.

Y.

- Yarrow, E. H. (*Steers*), 2901, Sep. 3, Oil-gas.
 Yates, H. & T. E., & Kellett, W. H., 1518, Apr. 26, Wire [cards].

Yates, T. E. & H., & Kellett, W. H., 1518, Apr. 26, Wire
[cards].
 — W., 4188, Dec. 20, Horse-shoes.
 — W. E., & Watson, R., 1664, May 8, Washing
[machines; churms].
 Yeomans, W. H., 3935, Dec. 1, Needle cases.
 Yewdall, E., 2085, June 12, Thermal reflector stoves.
 Young, A., 2748, Aug. 20, Chains.
 — C. D. (*Ryle*), 2332, July 5, Refrigerators.
 — F., 4050, Dec. 9, Carrying, raising, &c. ships' boats.
 — G., 347, Jan. 29, Lamp lanterns.
 — J., 1212, Apr. 2, Feeding steam-boiler furnaces.
 — J., 3156, Sep. 27, Preparing *Esperio* grass, &c.
[for paper].
 — J., 3654, Nov. 10, Muriatic acid.
 — R., 1056, Mar. 21, Shirts, fronts, &c.
 — W., 2529, July 24, Reaping and mowing.
 Yull, G. T., 485, Feb. 10, Clearing, &c. tramway tracks &
[roads].

Z.

Zahony, Baron E. R. von, (Brewer), 2912, Sep. 4, Paper-
[making].
 Zambra, J. W., & Negretti, H., 3091, Sep. 20, Thermo-
[meters].
 Zanni, G., 2266, June 30, Printing telegraphs.
 Zanzig, J. H. C., 3954, Dec. 2, Garments.
 Zenger, C. V., 3384, Oct. 18, Treating tinned plates, &c.
[to recover tin].
Zichermann, I. (*Lake*), 2357, July 8, Baking ovens.
Zimmerman, R. (*Gedge*), 2980, Sep. 11, Clipping animals.
 Zingler, H. (*Dubsky*), 694, Feb. 24, Carriage lamps.
 — H. (*Dubsky*), 2789, Aug. 23, Carriage lamps.
Zouboff, E., & Grounnere, N. (*Sauvée*), 1497, Apr. 25,
[Excavating, &c].
Zündel, C. (*Spence*), 2210, June 25, Volatile liquid engines.
 Zysel, F., 2182, June 23, Motive-power.

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Printers to the Queen's most Excellent Majesty.

15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.



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OF
PATENTEES AND APPLICANTS FOR PATENTS OF
INVENTION

For the Year 1874.

Printed and Published by Order of the Commissioners of Patents

UNDER THE

ACT of 15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.

BY BENNET WOODCROFT, F.R.S.,

CLERK TO THE COMMISSIONERS OF PATENTS.

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1875.

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For the Year 1874.

[The names printed in *Italic* are those of the persons by whom the inventions have been communicated to the Applicants for Letters Patent. The figures following the names are the consecutive numbers of the Applications.]

Abb-Alt]

[Alt-And]

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- Abbott, W., 12, Ships' boats.
 Abel, C. D. (*Redslob*), 168, Tell-tale pressure gauges.
 — (*Varinet & Enoult*), 184, Dressing fabrics.
 — (*Daimler*), 414, Gas motor engines.
 — (*Daimler*), 605, Gas motor engines.
 — (*Poutiloff*), 1277, Buildings.
 — (*Fehrman*), 1326, Traction springs.
 — (*Jachne*), 1610, Buildings.
 — (*Mueller*), 1636, Separating silk rag fibres.
 — (*Blake*), 1843, Shovels, spades, &c.
 — (*Foster*), 2488, Furnaces.
 — (*Fehrman*), 2505, Traction springs.
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 — (*Klunzinger*), 3293, Railway breaks.
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 Adames, C. H., 1316, Wrought iron kettles.
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 Adams, A. T., 1852, Raising and lowering windows.
 — G. A., 4106, Tide indicators.
 — J. S. (*Collicatt*), 333, Kaleidoscopes.
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 Adamson, T. A., & Pinker, J., 1236, Screw-propellers.
 — T. A., & Pinker, J., 3066, Removing screw-pro- [peller blades.]
 Addison, G., & Pilkington, E., 699, Safety lamps.
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 — H. & G., 681, Door plinth for excluding wind, &c.
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 — R., & Eastwood, A. J. & J., 2485, Furnace [dampers.]
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 — R. K., 2494, Artificial fuel.
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 — H., 2587, Gas.
 — H., 3127, Iron and steel.
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 Aldridge, J. H., 3659, Mounting and working gates.
 Alexander, A., & Smith, C., 1118, Steam-boilers.
 — E. P. (*Kay & Kay*), 1463, Shot cartridges.
 — (*Schmid*), 1799, Liquid meters.
 — (*Ménier*), 3814, Opening oysters, cutting [bread, &c.]
 — (*Brion*), 3996, Balloons; toys.
 — J., 3009, Cutting or getting coal, &c.
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 — R. H., Court, W., & Barton, J. C. (*Newton*), [2729, Fish hooks.]
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 Allaire, P. L., 4326, Gas.
 Allan, A., & Burns, J., 543, Fastening bale bands.
 — W., 3282, Metal foundries' blacking.
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 Allcard, H. J. (*Dinant*), 4307, Packing butter.
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 Allen, H., & Fitzpatrick, M., 1737, Deadening shocks, &c.
 — J. F., 614, Strengthening cannons.
 Allen, R. N. (*Haseltine*), 2810, Railway wheels.
 Allen, R. N., & Pullman, A. B., 4265, Railway wheels.
 — S., 4382, Packing valve spindles.
 — T., & Brine, G. J., 1530, Cistern apparatus.
 — T. P., 4306, Wheel tyre for road vehicles.
 Allerton, J., Handsecomb, S. H., & Moffatt, A. C., 4040, [Furnaces.]
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 — S., & Handyside, R. B., 2455, Detecting flaws in [shafts, &c.]
 Alleyne, Sir J. G. N., 161, Puddling iron.
 — Sir J. G. N., 2320, Puddling furnaces and rabblers.
 Allin, F. W. (*Clark*), 350, Cutting and screwing pipes.
 Allin, S. S., 4412, Registering entry of people.
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 — J. B., & Fryer, A., 1773, Drying and cooling.
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 — J. R., & Edwards, W., 2537, Pulverizing.
 Altendorff, O. (*Fagnus & Co.*), 3353, Fire-arms.
 American Enamel Co. (*Haseltine*), 4486, Pipes.
 — Sewing Machine Co., Hamburg- (*Jensen*), 3291, [Folding and pressing trimmings, &c.]
 Amos, J., 3846, Packing, &c. flour.
 Anden, W. M. van (*Clark*), 1996, Screw nuts.
 Anderson, C., 1195, Paper bags.
 — Sir James, & Ash, W. H., 4075, Telegraphs.

Anderson, James, & Kirkland, J., 1977, Sawing timber.
 — John, & Banks, L., 3285, Window sashes.
 — John, & Woodley, J. F. P., 102, Wood casks.
 — S., 2866, Cutting corks, bun s, &c.
 — W., 2268, Reciprocating steam-engines.
 — W., 4489, Producing and sustaining pressure.
 — W., 4490, Centrifugal pumps.
 Andouard, A. (Newton), 2081, Pulp strainers.
 Andrade, B., 457, Chopping machines.
 André, B. P. Jacques- (Newton), 2570, Steam-engines.
 Andrew, E., & Johnson, J., 2976, Metallic packing.
 — J. E. H., 3310, Twisting and rolling tobacco.
 Andrews, A. C., 59, Boots and shoes.
 — W., 95, Sewing-machines.
 — W., 3331, Hay-making.
 Anduze, E., 1226, Pounding and triturating machinery.
 Anduze, E. (Clark), 990, Coffee mills, &c.
 Angot, A. (Wirth), 1874, Knitting machines.
 Angström, C., & Wiman, E. (Hald), 3093, Steam-boilers [and tubes].
 Angus, R. N., & Hammersley, W. H., 1743, Piston rods, &c.
 Anhalt Machine Manufacturing Co., Berlin (Gottheil), [1565, Heated air motors].
 Anquetil, A. Thomas-, & Grenou, A. (Clark), 2210, Fire- [arms].
 Ansingh, E. W. (Van der Mey), 1938, Preventing [railway collisions].
 Anthony, E. L. H. C. D. T., & Cordurie, J. M. V. [(Haddan), 2708, Treating sulphides, oxides, &c.
 — T. T., Seimunds, C. H. E., & Benary, F. H. [(Such), 3539, Ships' compasses].
 Appleby, C. J. (Van Reitschoten & Houwens), 1283, [Removing sand banks, deepening rivers, &c.
 — C. J., 1285, Cranes.
 — C. J., & Cornes, C., 1284, Governors and [steam-boilers].
 — T., 3642, Trimming oil-cake, &c.
 Applegarth, R. (Denayronze), 2015, Tubes for divers.
 Appleton, T., 2858, Circular knitting frames.
 Apsey, J., 3012, Steam tramway cars.
 Ara, A., & Del-Bubba, M., 1595, Preserving metals.
 Archbald, A. (Corkran), 87, Manures.
 Archbold, G., 360, Producing aluminous compounds.
 Archer, J., 1757, Making screw bolts.
 — T., 2739, Crushing ores.
 Aris, J. J., 625, Horse-shoes.
 Arlincourt, L. C. A. J. G. d' (Clark), 3250, Telegraphs.
 Armitage, J., 2556, Feeding carding engines.
 — S. C., 2070, Self-regulating horse-hoes.
 Armstrong, F., 666, Claspings pin for shawls.
 Armstrong, F. (Lake), 2860, Chucks for lathes.
 Armstrong, J., & Neill, R. H., 3861, Dressing flour.
 Armstrong, W. N., & D'Infreville, G. (Clark), 954, [Electric telegraphy].
 Arnheim, F. (Stöffler, Schmitzhe & Klett), 597, Presses.
 Arnold, B. (Lake), 2138, Fishing nets.
 Arnold, T., 940, Furnace fire-bars.
 — W., 3501, Steam boilers.
 Aronson, J. N., 817, Lamps.
 — J. N., 2878, Lamps.
 Artige, D. (Bonneville), 4418, Steam-boilers.
 Ash, W. H., & Anderson, Sir J., 4075, Telegraphs.
 Ashbury, T., 898, Weldless tyres.
 Ashton, J. C., 2054, Steam exhausters.
 Ashwin, J., & Carter, R., 2121, Fastenings for jewellery.
 — J., & Carter, R., 2261, Fastenings for jewellery.
 Ashworth, D. (Newton), 904, Hose couplings.
 Ashworth, E. & G., 3441, Opening and cleaning fibres.
 — E. & G., 3567, Steam pumps.
 — E. & G., 4213, Steam pumps.
 — G. & E., 3441, Opening and cleaning fibres.
 — G. & E., 3567, Steam pumps.

Ashworth, G. & E., 4213, Steam pumps.
 Aslin, J., & Warner, R., 4250, Brooch fastener.
 Aspinwall, L. A., 3655, Potato diggers.
 — L. A., 3703, Planting potatoes.
 — L. A., 3723, Washing machines.
 Aspland, H. (Jensen), 2522, Locomotive engines.
 — H. (Jensen), 4048, Locomotive engines.
 Asquith, S. E., & Greenwood, F. A., 2803, Spinning.
 Asten, J., 1686, Sewing-machines.
 Atkins, F. H., 506, Filters for ships' tanks.
 — J., 210, Ornamenting metallic tubing.
 — J., 1925, Furniture castors.
 — J., 3465, Metallic bedsteads, &c.
 — T., 3101, Stoppers; filling bottles, &c.
 Atkinson, James, 105, Travelling cap or head dress.
 — James, 1017, Compressing and closing pipes.
 — John, 1441, Bricks and tiles.
 Atkinson, W. (Clark), 2563, Steam pumps.
 Atock, M., 2716, Boring, turning, and key-bed grooving.
 Attwood, G., & Silver, W. J. (Newton), 873, Pumps.
 Atwood, L. L. (Townsend), 3013, Boots and shoes.
 — L. L. (Townsend), 3183, Stitching button holes.
 Aub, A. (Hirschhorn), 3832, Shirt collars, cuffs, &c.
 Aubert, M. A. S. (Henderson), 1902, File fabrics.
 Aubin, J., 2184, Millstones.
 Audouin, M. E. P., & Pelouze, E. P. (Clark), 322, Gas.
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 — H. G., 2854, Ladies' dress suspenders.
 Axon, C., & Bullough, A., 2777, Railway couplings.
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 — H. H., A. S., & W. A., & Chambers, W., 4374, [Oil-cake].
 — W. A., H. H., & A. S., & Chambers, W., 4374, [Oil-cake].
 Ayres, R. H., & Elsdon, R., 3497, Iron houses.
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Babbitt, B. T. (Newton), 459, Steam-boilers.
 — B. T. (Newton), 1601, Caustic alkali packages.
 Babcock, A. & N., Ewell, C., & Howes, S. (Lake), 1898, [Purifying and grading middlings].
 — N. & A., Ewell, C., & Howes, S. (Lake), 1898, [Purifying and grading middlings].
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 Bacon, J., & Searle, H., 3954, Hydraulic pumps.
 Bacq, F. le, 221, Horse-shoes.
 Badcock, J., 1852, Trimming skirts of dresses, &c.
 — J., 2651, Dyeing linen threads, &c.
 Baerlein, M., 1098, Preparing and drying yarn.
 Baffoy, P. H., Dupré, P. S. E., Rogé, H. N., & Poret, [E. (Clark), 3392, Preserving wood].
 Bageau, H. L., 649, Waterproof compounds.
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 Baggs, I., 673, Electric telegraphy.
 — I., 2821, Gas for and inflating, &c., balloons.
 Bagot, J., 3932, Railway signals.
 Bailes, R., & Hallsworth, S., 2408, Clarifying impure [waters].

- Bailes, R., & Hallsworth, S., 3459, Treating sewage.
 Bailey, E. V., 2195, Fixing door knobs.
 — G., 1975, Disc or tablet for correcting steel pens.
 — I., 3068, Boxes for preparing fibres for combing.
 — J., 958, Railway points.
 — J., 1330, Railway points and signals.
 — J., 3104, Marking and measuring yarns.
 — W. H., & Colles, A. H., 3927, Scoring billiards.
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 Baillet, E. (Clark), 2188, Papering pins.
 Baillie, R., & Westwood, J., 2191, Iron piles and [columns].
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 Baker, J. (Haseltine), 2289, Scoop and sifter.
 Baker, J. M. B., 1631, Preventing doors from slamming.
 — J. M. B., 1794, Horse-shoes.
 — T., Bombroffe, J., & Cook, E., 1671, Clay mills.
 — T. H., & Steed, A. G., 4416, Preserving sub-
 [stances, protecting explosives].
 — W., 1474, White and red lead and litharge.
 — W., & Unwin, J., 1493, Electro-deposition.
 Balbiani, E. (Viehoff), 3196, Extracting peat.
 Baldwin, J. F. (Hunt), 1716, Planes.
 — N. A. (Hughes), 1867, Sewing-machines.
 Bale, F., 521, Salt.
 — J., 4292, Brooches; dress and hair ornaments.
 Ball, A., 2583, Constructing, heating, &c., buildings.
 — C. J., 206, Rock drills.
 — C. J., 1347, Drawing and adjusting curtains.
 — C. J., 1749, Compressing air or other fluids.
 Ballard, J., & Froggatt, W., 3855, Bottle stoppers.
 — S., & Pitts, M., 1863, Warming and ventilating.
 Ballingal, R., 1177, Self-registering anemometer.
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 — (Crane), 2343, Hubs or axle-boxes.
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 — D., 3870, Artificial fuel.
 — E. D., 3164, Pump and engine valves.
 — E. D., 3334, Railway breaks.
 — F. C., 1717, Adapting books to domestic uses.
 — James, 1368, Coloring paper or pasteboard.
 — John, & Stott, J., 2766, Drying fabrics.
 Barling, J., 2357, Treating hop bines and roots.
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 — H. B. (Dobson & Dobson), 11, Carding wool.
 — (Galland), 678, Brewing.
 — (Galland), 1988, Malting.
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 — W. H., 90, Pens.
 Barnard, B., 1107, Tables.
 — F., 2582, Embroidery or bordering for skirts, &c.
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 [(Clark), 2041, Carriage springs].
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 — A. C., 4319, Postal sample bags and envelopes.
 Barou & Montegut (Gedge), 2125, Carriage doors.
 Barr, H. J., 1745, Automatic railway signals.
 — H. J., 1881, Indicating revolutions, speed, &c.
 — R. & W., 2119, Engaging and disengaging boats.
 — W. & R., 2119, Engaging and disengaging boats.
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 — H., 955, Spring brooch back.
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 — J. H., & Haigh, A., 1116, Taps and cocks.
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 — T., 3139, Furnaces, pans, &c., for making salt.
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 — P. (Koch & Mueller), 3979, Lathes, for turning.
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 — H. (Barton), 4059, Flexible hose carriers.
 Barton, J. C., Alexander, R. H., & Court, W. (Newton),
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 Bastie, E. (Morgan-Brown), 3021, Stearine.
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 Bate, J. J. (Haseltine), 2352, Refrigerating.
 — J. J. (Lake), 3790, Refrigerators.
 — J. J. (Haseltine), 4321, Refrigerating.
 Bateman, D., & Mortimer, M., 2254, Looms.
 — T. S., Mellard, J., & Sykes, J., 145, Rolling metals.
 — W. F., 1202, Making spaces in condenser doffers.
 — W. F., 1979, Cutting leather straps for joints.
 Bates, F. G., Kellogg, C. H., & Lewis, G. S. (Clark),
 [3713, paper bags].
 — J. L. (Haseltine), 3186, Elevating coal, &c.
 Batho, W. F. (Leslie & Molesworth), 2869, Railways.
 Batley, J., Kelley, G., Houghton, W., & Senior, B., 827,
 [Spinning].
 — W. S., & Watkinson, J., 3537, Drying-floors.
 Batsford, C., & Bloore, E., 1334, Rack pulleys.
 Batstone, C. & W., 745, Lining for grates, &c.
 — W. & C., 745, Lining for grates, &c.
 Batten, W., 3992, Ventilator, flushing box, &c., for
 [sewers].
 Battersby, J., & Wilson, W., 1651, Chaff-cutters.
 — J., & Wilson, W., 3109, Horse-gear for driving
 [machinery].
 — J., & Wilson, W., 3798, Chaff cutters.
 — T., & Shippobottom, F., 4248, Skewers and
 [creel frames].
 Batty, J., & Blackburn, J., 2531, Feeding carding engines.
 Baud, V. P. C., & Saulzeux, A. A. (Laubarede), 3982,
 [Beer].
 Baudelot, D., 2691, Lamps and burners.
 Baudry, C. J. (Johnson), 3984, Indicating fire, &c.
 Bauer, G. W. M., & Blazicek, F., 2973, Combustion
 [of fuel].
 — J., 2158, Railway carriage couplings.
 Baumeister, L., & Flürscheim, M. (Dann), 1983, Light-
 [ing and extinguishing gas].

- Baville, E. P.* (Bonneville), 1231, Tool-holders.
Bawden P., 3627, Brick-making.
Baxter, De W. C. (Johnson), 1677, Forges and blowers.
Baxter, J. C., 482, Obtaining motive-power.
 — *R.*, 2924, Instrument for slaughtering animals.
Baxter, W. (Newton), 2050, Compound engines.
 — *W. D.* (Lake), 1286, Double-acting pumps.
Bayart, F. & H., 4197, Looms.
 — *H. & F.*, 4197, Looms.
Bayer, F., Weskott, F., Siller, A., & Rumpff, C., 2071, [Oxidising anthracene for dyes, &c.
Bayley, E. H., 3923, Slop carts and wagons.
 — *G. H. & H. D.*, 897, Taps or valves.
 — *H. D. & G. H.*, 897, Taps or valves.
Baylis, H., & Jenkins, H. M. (Clark), 4426, Needles.
Bayliss, T. R., 803, Cartridge cases.
Baymé, A. (Gedge), 808, Stopping bottles.
Bazan, F., Mégy, L., & De Echeverria, J., 3656, Speed [regulators].
Bazin, E., 3694, Dredging boats.
Beale, J., 1711, Pumping gases, air, or fluids.
Bean, E. E., 2380, Gas-lighting apparatus.
Beardsley, J. H. (Lake), 837, Protecting the eyes & lungs.
Beath, J. M. G. (Benson), 2460, Ice-making.
 — *J. M. G.* (Benson), 4152, Refrigerating; ice-making.
Beatson, J. S., & Lowe, E., 1981, Puddling iron.
 — *W.*, 2272, Alum and its products.
Beaudet, L. A. (Gedge), 4423, Tannin.
Beaumont, F. E. B., 392, Steering vessels.
 — *F. E. B.*, 1149, Drilling or boring rock or stone.
 — *F. E. B.*, 2424, Steering apparatus.
 — *F. E. B.*, 4402, Percussive rock drills.
 — *J.*, 2278, Cleaning the teeth of carding engines.
Beauregard, F. A. Testud de, 1069, Packing.
Beaurepaire, L. R. R., de Louvigny, Comte de, 591, [Alcohol].
 — *L. R. R. de Louvigny, Count de*, 4450, Regulating exhaust steam for heating, &c.
Beavan, A. H., 3378, Stowing cattle on board ship.
Beberdick, C., & Gschwind, J. (Clark), 421, Mouldings.
Beck, C., 1668, Registering billiards and other games.
 — *J. (Edgerton)*, 3366, Oxygen and hydrogen gases.
 — *W., & Strong, W.*, 424, Bricks.
 — *W. H.*, 766, Gas.
 — *W. H. (Bidel)*, 2735, Purifying feed water.
Becker, L. (Lake), 4171, Railway couplings.
Becker, L. M., 9, Shuttles, spools and bobbins.
 — *L. M.*, 2066, Sewing-machines.
Beckett, J., 778, Operating railway breaks.
Beckwith, W., 2152, Hoeing turnips.
Beckwith, W. G. (Haseltine), 474, Sewing-machines.
Beecroft, T., 2818, Sewing-machines.
Beilby, G. T., 1967, Treating mineral oils.
 — *G. T., & Kirk, A. C.*, 4329, Producing cold.
Bélicard, J., 2014, Weaving pile fabrics.
 — *J., & Roberts, R.*, 3835, Looms.
Belier, C. (Roullier), 213, Mats.
Bell, A., 3777, Steam generators.
 — *J.*, 1824, Distilling shale for oil and gas.
 — *M.*, 737, Ornamenting book covers, &c.
Bell, W. (Lake), 2250, Fabrics; wood substitute, &c.
 — *W. (Lake)*, 4343, Compound for, and surfacing [fabrics, &c.
Bellamy, C., 3223, Friction breaks.
Belleguic, P. J. le (Hunt), 2643, Railway breaks.
Belli, E., 1802, Working railway signals.
Bellini, G., & Carobbi, C., 961, Air-engines, &c.
Belsham, M., 1183, Core tubes of boring machines.
Belshaw, R., 3059, Circular knitting machines.
Benary, F. H., Anthony, T. T., & Seimunds, C. H. E. [(Such), 3539, Ships' compasses.
Benham, A., & Froud, J. W., 846, Ice safes.
Benjamin, B., & Dolman, G. W., 1134, Indicators.
 — *H.*, 682, Extracting oleaginous matters.
Bennett, A., 1255, Galvanic batteries.
 — *A.*, 2086, Hand blowers and fumigators.
 — *C.*, 945, Fastening scarf pins, &c.
 — *C.*, 1765, Lamps.
 — *J., & Stockman, B. P.*, 1077, Lamps and prisms.
 — *J. E.*, 3664, Metal match boxes.
 — *J. E., & Hydes, T.*, 948, Steam-boilers and flues.
 — *S.*, 2710, Coke ovens and furnaces.
 — *T. S.*, 129, Pickers used in weaving.
Benninghaus, E. (Wübbel), 3386, Earth boring.
Bennis, E., 3783, Feeding furnaces with fuel.
Benson, M. (Morris, Robinson, Mackenzie & Brocchus), [64, Furnaces.
 — *(Painter)*, 121, Pump valves.
 — *(Ferguson)*, 426, Pipe tongs and cutters.
 — *(Rehbein, Roberts, & Brocchus)*, 495, Welding.
 — *(Cope & Maxwell)*, 1086, Steam-engines.
 — *(Whitely)*, 2173, Reaping and mowing.
 — *(Beath)*, 2460, Ice-making.
 — *(Cope & Maxwell)*, 3361, Steam or air compressing engines.
 — *(Compton)*, 3369, Joining metal bands.
 — *(Beath)*, 4152, Refrigerating; ice-making.
Bentall, E. H., 726, Root pulpers.
Bentley, G. W., 1478, Compressed leather.
 — *G. W.*, 2262, Treating wool, &c., for fatty matters.
 — *G. W.*, 4452, Treating oily and fatty matters.
 — *J.*, 2315, Pumps.
Berdan, H. (Bradley), 1536, Metallic cartridge cases.
Berenger, J. A., & Stingl, J. (Paget), 3613, Purifying [waters].
Bergner, W. H. J., 2377, Horse capstans.
Bergreen, C. R. (Brewer), 4100, Steam-boilers.
Berlin-Anhalt Machine Manufacturing Co. (Gotthel), [1565, Heated air motors.
Bernays, J., 2674, Steam and other engines.
Berryman, R., 3306, Heating, &c. feed-water.
Berthet, A., & Labérie, P. (Hugon), 2068, Disintegrating.
Berthier, S. A. L. (Bonneville), 14, Printing presses.
 — *(Bonneville)*, 15, Copying presses.
Berthon, E. L., 1353, Equatorial telescopes.
Bertram, L. B., 3187, Pens for dispensing with liquid ink.
Bertrand, L. E. (Johnson), 1869, Umbrellas and parasols.
Besseling, J. P. (Gedge), 4422, Railways.
Bessemer, H., 3274, Ships' saloons, cabins, &c.
 — *H.*, 3319, Supplying water.
 — *H.*, 4258, Ships' saloons, cabins, &c.
Besson, — (Tongue), 2753, Musical instruments.
Betteley, J., 48, Ships' propellers.
 — *J. H.*, 686, Starting and stopping tram cars.
 — *J. H., & Davison, W.*, 2276, Checking fares, &c.
 — *J. H., & Sharer, T.*, 2765, Tramway breaks; cars.
Betting, P. J. (Tongue), 3540, Copying presses.
Betts, J. Y., 2798, Preventing incrustation in boilers.
Bevan, E., 1473, Paper pulp.
 — *W.*, 3793, Electric point indicator.
Beverley, W., 175, Life buoys.
Beynon, G. W., 1237, Adjusting railway signal wires.
Bezinge, J. A., Dordron, L., & Villeron, A. (Clark), [1049, Butter.
Bibby, W., Lang, J., & Westly, T., 2143, Shuttles.
Bickerton, J. (Mauger), 2963, Paper-cutting machines.
 — *S.*, 912, Preparing fibres for spinning.
Bickford, D. (Morgan-Brown), 1392, Knitting machines.
Bidel, A. (Beck), 2735, Purifying feed water.
Bieger, E. (Wise), 2605, Stop valves.
Billings, G. K., 2043, Stirrup bars.
 — *G. K., & M.*, 137, Steam generators.
 — *J. E.*, 3117, Angle bricks.

- Billings, M., & G. K., 137, Steam generators.
 Binaepfel, J., & Pointer, G. T. P., 3360, Dress improvers.
 Bingham, T. R. D., 2576, Rudders.
 Binnie, R., 4297, Steam pump condensers.
 Birch, R. W. F., 1157, Flushing sewers, drains, &c.
 Birchall, J. T., Turton, S., & Jolley, W., 3778, Valves.
 Bird, F., 2836, India-rubber tires.
 — F. J., 179, Mordants for cotton goods, &c.
 — M., 4295, Waterproofing leather.
 Bischof, G., 2243, Water filters.
 Bishop, G. H., & Bishop, T. B., 4101, Sewing machines.
 — G. H., Hall, H. M., & Bishop, T. B., 1527, [Sewing-machines].
 Bishop, T. B., & Bishop, G. H., 4101, Sewing machines.
 — T. B., & Bishop, G. H., & Hall, H. M., 1527, [Sewing-machines].
 Bisschop, A. de (Newton), 1910, Motive-power.
 Bjarnason, T., 1499, Scythes.
 Black, J. H. (Lake), 978, Device for carrying cartridges.
 Black, N., & Leiper, A., 2013, Economising fuel, &c.
 — W., & Hill, D., 173, Soda.
 — W. Y., 408, Railway switches.
 Blackburn, A. B., & B., 507, Steam-engines.
 — B. & A. B., 507, Steam-engines.
 — J., & Batty, J., 2531, Feeding carding engines.
 — T., 540, Size.
 Blaiberg, S., & Crowley, J., 881, Life boats.
 Blair, T. S. (Imray), 308, Regenerative furnaces.
 — (Imray), 2557, Steel.
 Blair, T. T., 235, Anti-fouling composition for ships.
 Blake, C. E., 92, Dentistry.
 — G., & Tompkins, R., 3167, Boat lowering apparatus.
 — G., & Tompkins, R., 3169, Steadying and steering [ships].
 Blake, G. F. (Lake), 4388, Pump and engine cylinders.
 Blake, J., 396, Steam generators and safety valves.
 Blake, T. J. (Abel), 1843, Shovels, spades, &c.
 Blakewell, W., & Hosking, R., 2760, Rock drills.
 Bland, H., 4241, Sewing-machines.
 — J., 2436, Looms.
 — J., 4327, Healds for textile fabrics.
 Blaxland, G., 401, Raising sunken vessels.
 Blazicek, F., & Bauer, G. W. M., 2973, Combustion of [fuel].
 Bleasby, A., & Haigh, W. B., 556, Furnaces or cupolas.
 Blews, W. H. M. (*De Vrij*), 1534, Purifying quinoidine.
 Blick, J., & Willis, H., 4420, Slide-valves.
 Bliss, S. B. (Clark), 2366, Making soap bubbles.
 Bloomer, F., 3683, Fire grates of furnaces.
 — F., & Halford, T., 1102, Railway signals.
 Bloore, E., & Batsford, C., 1334, Rack pulleys.
 Bluemel, C. A., 1397, Ornamenting wood.
 Bodel, L. G., 3235, Hobby-horses and toy carriages.
 — L. G., Masse, J., & Webster, W., 3277, Stamping [documents].
 Boëthius, E. (Gilbee), 354, Cork-cutting machines.
 Böhringer, J. G., & Brühls, C. D. C. (Schallehn), 2305, [Carriage breaks].
 Bois, A., 2407, Safety guard for tram-cars.
 Boll, M., & Wacker, C. (Bonneville), 647, Ships' fenders.
 Bollé, C., & Craven, W., 4335, Sawing & cutting metals.
 Bolleter, H., 3055, Preserving animal substances for [food].
 Bollmann, L. (Gardner), 3126, Grinding metals, &c.
 Bolton, J., 2935, Moulding fuel, &c.
 Bombroffe, J., Baker, T., & Cook, E., 1671, Clay mills.
 Bond, F. T., 1509, Filtering and purifying liquids.
 — F. T., 1510, Disinfecting and deodorising.
 — F. T., 2706, Sifters and distributors.
 — F. T., 3326, Treating liquid refuse.
 — F. T., 3330, Dry and water closets.
 — F. T., 3799, Deodorising and disinfecting.
 Bond, J., Threlfall, R. A., & Hamer, W., 30, Polishing [spinning rollers, &c.].
 — W., 2775, Printing machines.
 Bonjour, J. (Gedge), 2124, Testing alcohol.
 Bonnell, J., & Hornsby, R., 2307, Thrashing machines.
 Bonnefin, F. A., 3384, Manure.
 Bonneville, H. A. (*Berthier*), 14, Printing presses.
 — (*Berthier*), 15, Copying presses.
 — (*Lambert*), 110, Coal pit wagons.
 — (*Leeb*), 471, Table tops.
 — (*Joly*), 518, Fire alarms.
 — (*Broux & Broux*), 644, Axle sockets.
 — (*Wacker & Boll*), 647, Ships' fenders.
 — (*De Mestre*), 683, Wiring bottles.
 — (*Devlan*), 767, Packing journal boxes.
 — (*Le Boulengé*), 1003, War instrument.
 — (*Brunot*), 1004, Distance register.
 — (*Marchand*), 1170, Breaks and couplings.
 — (*Broux*), 1230, Lubricating spindles.
 — (*Baville*), 1231, Tool-holders.
 — (*Burns, Higgins & Higgins*), 1271, Water closets.
 — (*Rampant*), 1561, Drying bagauze.
 — (*Couteau*), 2362, Sowing potatoes.
 — (*Martin*), 2536, Spinning fibres.
 — (*Nevière*), 2590, Boots and shoes.
 — (*Nevière*), 2591, Brooms and brushes.
 — (*Devlan*), 3051, Propelling vessels.
 — (*De Mestre*), 3271, Securing bottle corks.
 — (*De Mestre*), 3272, Corking bottles.
 — (*Chaudoir*), 3273, Jacks.
 — (*Valentin*), 3660, Woollen fabric.
 — (*Steinway*), 4015, Pianoforte attachments.
 — (*Oustalet*), 4206, Coal-bricks.
 — (*Eames*), 4346, Iron and steel.
 — (*Gaillet*), 4347, Hydrostatic motor.
 — (*Havard*), 4417, Steam or compressed air [carriages].
 — (*Artige*), 4418, Steam-boilers.
 — (*Chutaux*), 4453, Electric batteries.
 — (*Chutaux*), 4454, Motive power.
 Booth, E., & Tetlow, H., 2310, Shuttles.
 — John, 1295, Heating steam-boilers.
 — John B., & Draper, G. & W. F., 1835, Spinning, &c.
 — Joseph, 2859, Twist lace machines.
 Borde, J., 3363, Puzzle game.
 Bories, J. A., & Lamarque, B. (Johnson), 4492, Curbing [horses].
 Borin, G. (Imray), 3467, Surgical instruments.
 Bosquet, A. (Clark), 3100, Capsuling bottles.
 Bossert, A. (*Holder & Stotz*), 3024, Shearing sheep.
 Bothwell, J. (Haseltine), 3489, Feeding gas retorts.
 Bott, G., & Stanford, N., 2153, Rolling iron and steel wire.
 Bottomley, S., & Lumb, J., 2781, Lubricators.
 — W. H., Naylor, J., & Crabtree, W., 1439, Looms.
 Boudriot, G. (Wirth), 2201, Brickmaking.
 Bouju, L. D. P., & M. R., & Chamas, J. E. (Clark), 3877, [Paper pulp].
 — M. R., & L. D. P., & Chamas, J. E. (Clark), 3877, [Paper pulp].
 Boulengé, P. E. le (Bonneville), 1003, War instrument.
 Boulton, W., 1119, Working potters' clay.
 Bourcart, J. J. (Clark), 2479, Spinning.
 Bourdais, A. (Clark), 1048, Sewing leather.
 Bourdin, J., 2232, Transmitting motive-power.
 Bourgeois, F. (Johnson), 1420, Paper hangings.
 Bourget, P., & Michalet, F. (Clark), 3461, Embroidering.
 Bourgougnon, J. A. R., 2292, Break or stop for cranes, &c.
 Bourne, G., 1172, Metal tubes.
 Bousfield, E. T., & Howard, J., 178, Steam cultivators.
 — E. T., & Howard, J., 331, Steam-boilers.
 — E. T., & Howard, J., 3080, Tilling land.
 — G. T. (*Manley*), 58, Engines and pumps.

- Bousfield, (Smith), 380, Electrical machines.
 — (Farron), 690, Rock-drilling machines.
 — (De Brochofsky), 1247, Rotary engines.
 — (Heaton), 2194, Buttons.
 — (De Fresno), 2368, Propelling ships.
 — (Stow), 2696, Dental engines.
 Bovill, W. E., 4255, Marine boilers.
 Bowden, E. T., 1654, Training hop plants, &c.
 Bowen, O., & Miller, A., 3324, Decomposing noxious [gases].
 Bower, C. F., 2317, Rotary knife cleaners.
 Bowers, W. H., and Fyfe, D. A., 4112, Recovering alkali.
 Bowker, W., 1999, Punching jacquard cards.
 Bowman, H., & Newall, R. S., 165, Muriatic acid gas.
 Bown, W., 715, Horse clippers.
 Bowness, W. D., & Judge, J., 2632, Gas.
 Bowyer, E., & Strupp, J., 4019, "Wiring" hat and bonnet [shapes].
 Box, H. N., & Jones, W., 4219, Boot and shoe heels.
 — W. W., 566, Gas.
 Boyce, J. E., & Hobday, H. J., 2471, Umbrellas & parasols.
 Boyd, J. & T. A., 1982, Moulds for casting metals.
 — J. & T. A., 4119, Winding yarn or thread.
 — T. A., & J., 1982, Moulds for casting metals.
 — T. A., & J., 4119, Winding yarn or thread.
 Boyle, R. K., 2659, Electric telegraphs.
 Bozzini, A. (Clark), 2389, Printing fabrics.
 Bradbury, C. T., & Gartside, J. H., 2492, Woven fabrics.
 — G. F., and Lomax, H., 263, Sewing-machines.
 — G. F., Chadwick, T., & Sugden, T., 1823, [Sewing-machines].
 — J., 1056, Steam generators.
 Bradford, H. W. (Clark), 4491, Litholycites.
 — J. M. (Clark), 2648, Electro-magnetic gover- [nors].
 Bradford, T., 1272, Churns.
 — T., 1273, Washing, wringing and mangling.
 — T., 3337, Churns.
 — T., 3338, Washing, wringing and mangling.
 Bradley & Hubbard (Lotz), 2952, Suspending chandeliers.
 Bradley, C. W., & Peacock, J. C., 3248, Gas.
 — G., Matters, J., & Wrigley, T., 2756, Consum- [ing smoke].
 — H., 586, Tell-tale money boxes.
 — H., 2944, Check registering apparatus.
 — H., & Bull, W., 4479, Fare registers.
 — I., 1805, Heading metallic cartridge cases.
 — (Berdan), 1536, Metallic cartridge cases.
 — J., 3255, Knitting machines.
 Bradley Window Co. (Gedge), 91, Ventilating window.
 Bradshaw, J. B., 872, Hoop iron.
 — J. B., 1182, Bale hoops.
 — J. B., 2329, Bale hoops.
 Brady, F. H., 738, Saving fuel in fire grates.
 Braidwood, J., 3919, Discharging water, &c. from pipes.
 — J. F., 697, Securing the lids of retorts.
 Brakell, C., 313, Weaving and cutting pile fabrics.
 — C., 2190, Diminishing the noise in vehicles.
 — C., 2599, Weaving pile fabrics.
 Bramall, S., & Groves, F., 83, Railway breaks.
 Bramwell, G., 79, Restoring and dyeing hair.
 Brand, R. E. (Clark), 3072, Ironing or finishing hats.
 Brandon, A., 8584, Studs, solitaires, sleeve links, &c.
 — J. (Lavandier), 3161, Soap, pomades; cosmetics.
 Brannon, P., 1246, Building materials.
 — P., 1872, Bridge girders.
 — P., 1472, Decorating slabs, panels, &c.
 — P., 2027, Furniture and materials for same.
 — P., 2028, Ship-bullding.
 — P., 2029, Safes and strong rooms.
 — P., 2033, Constructing and surfacing roads.
 — P., 2128, Building materials.
 Braum, A. H. (Stahlschmidt), 4011, Coloring, &c., [photographs].
 Braun, O., 4348, Extracting substances from wool, &c.
 — W. F., 2356, Spiral springs.
 — W. F., 2940, Railways.
 Bray, A. J., 3619, Raising and lowering merchandise.
 — H., 3108, Gas.
 Brayton, G. B. (Haseltine), 2209, Gas-engines.
 Brazenor, T., 3680, Horse-shoes.
 Brechin, J. B., 1216, Economising fuel.
 Breckon, J. R., 2287, Coke.
 Brevet, E., 1359, Stopping and unstopping bottles.
 — E., 3595, Stopping and unstopping bottles.
 Brehmer, A., 2665, Shaft couplings; wheel hubs.
 Breithaupt, T. A. (Johnson), 2083, Preserving hops.
 Bremme, G. A. C., 1106, Engine and pump valve gear.
 — G. A. C., 2361, Valve gear for motive-power [engines].
 Brennan, J., 139, Teaching arithmetic.
 Brent, H., & Harrington, J., 2554, Gaseliers.
 Brereton, F. S., 2524, Fire-proof structures, &c.
 Bret, C. (Gedge), 1579, Traction engines.
 Brett, H. R., & Williams, R. F., 3115, Bottle crates.
 Breval L. (Johnson), 3096, Scraping hides or skins.
 Brevoort, H. L., & Craig, W. (Wilson), 2059, Valves.
 Brewer, E. G. (Joly), 433, Incinerating substances from [wool].
 — (Weedermann & Sons), 660, Ships and propellers.
 — (Diderichsen), 661, Artificial butter.
 — (Vibrant), 1597, Looms.
 — (McLean), 2629, Clasps.
 — (Carpenter), 3357, Door knobs.
 — (Bergreen), 4100, Steam-boilers.
 Bricknell, G. H., 796, Fastenings for scarf rings.
 — G. H., 841, Studs and dress fastenings.
 Brierley, J., 3581, Chimney tops.
 Briesen, R. von, & Wenck, G. J. (Clark), 2690, Port- [able fountains].
 Briggs, J., Hudson, R., & Grimshaw, H., 4471, Fabrics.
 — J. A., & Abell, G. M., 2319, Steel and iron ware.
 — T. J., Willoughby, S. & J., & Southwell, W. A., 839, [Tar].
 — T. J., Willoughby, J. & S., & Southwell, W. A., [1126, Evaporating pans].
 Bright, R. & Newbery, J. C. (Bright), 691, Extracting [gold].
 Bright, T. (Bright & Newbery), 691, Extracting gold.
 Brinckerhoff, E. O. (Clark), 4221, Steam-condensers.
 Brine, G. J., & Allen, T., 1530, Cistern apparatus.
 Brinsmead, H., 2730, Cleaning rotary screens.
 Brion, S. L. (Alexander), 3996, Balloons; toys.
 Brissonneau, J. & M., & Lahaye, B. (Hunt), 3071, Sugar [cane mills].
 — M & J., & Lahaye, B. (Hunt), 3071, Sugar [cane mills].
 Broadbent, C. R., Nuttall, W., & Isherwood, T. (Clark), [1539, Looms].
 Broadbent, J. W., 1535, Heating feed-water.
 — L. E., 3479, Spinning, &c.
 — L. E., 3752, Weaving.
 Broadfoot, J., 239, Pumps.
 Broadley, J., & Hodgson, G., 2147, Weaving.
 Broadwell, L. W. (Gardner), 3399, Cannons & projectiles.
 Brocchus, P. E., Morris, G. W., Robinson, J. S., & [Mackenzie, G. N. (Benson), 64, Furnaces].
 — P. E., Rehbein, W. G., & Roberts, H. (Benson), [495, Welding].
 Brock, C., 1562, Decorating fictile manufactures.
 — W. K., 963, Billiard tables.
 Brockbank, J. C., 3015, Checking pawnbrokers' pledges.
 — J. C., 3673, Marking pawnbrokers' tickets, [dates, &c].

- Brockbank, J. C., 4259, Stamping and registering tickets.
 Brockelbank, T. A., 3591, Weighing.
 Brochofsky, G. de (Bousfield), 1247, Rotary engines.
 Brodhead, F. D., 4392, "Sectional can."
 Brook, E., & Wilson, A., 427, Consuming fuel in furnaces.
 — H. J., Draper, E. G., & Unwin, J., 1492, Electroplating.
 — H. J., Draper, E. G., & Unwin, J., 2454, Deposit-
 [ing metals].
 Brookes, A. G. (Farjon), 2667, Copying presses.
 — R. P., & West, T., 1914, Wheels and axles.
 — W. (Chaumont), 1431, Warming carriages.
 — W. H., 84, Pumps.
 Brooks, F. W. (Everett), 500, Liquid meters.
 Brooks, F. W., 4036, Liquid meters.
 Brooks, G. J., (Newton), 4244, Tubing, shafting & axles.
 Brooks, J. B., 2443, Sleeve links and solitaires.
 — R., & Stephens, R., 2513, Railway points, &c.
 — R. C., & Van Winkle, A. J., 4209, Alcohol.
 — S., Harrison, G., & Goodbehere, T., 1502,
 [Spinning and doubling].
 — W., 727, Fringing fabrics.
 Brossard-Vidal, M. E. E., & Malligand, P. M. E.
 [(Clark)], 1885, Ebullioscopes.
 Brotherhood, P., 3883, Slide-valves.
 Brough, N., 3742, Boxes or cases for matches, &c.
 Broughton, F., & Stephens, R., 1198, Steam-break.
 — T., 819, Concrete buildings.
 — W., 2654, Coating steam-boilers, &c.
 Broux, A. & D. (Bonneville), 644, Axle sockets.
 — D. (Bonneville), 1230, Lubricating spindles.
 — D. & A. (Bonneville), 644, Axle sockets.
 Brower, B., 2198, Inkstands.
 Browett, T., 2887, Forging or stamping metals.
 Brown, A., 307, Dredgers.
 — A., 1891, Breaks for railway and other carriages.
 — A., & Simons, W., 2038, Dredgers.
 — A., Barns, J. W., & Simons, W., 3789, Dredgers.
 — A. B., 2805, Hydraulic bolt-making machines.
 — B., 1574, Boilers used in paper-making.
 Brown, D., & Fulton, J. (Haseltine), 1054, Sheep shears.
 — E. (Lake), 1421, Rotating shaft indicators.
 Brown, F. B., 3382, Sleeve links, studs, &c.
 — G., 3693, Preventing collisions on railways.
 — H. E., 2996, Carriages.
 Brown, H. F., Niblock, J. G., Zimmerman, W. H., &
 [Alexander, J. S. (Johnson)], 2501, Cutting
 [coal, &c.].
 Brown, I., 693, Pipes for watering and irrigating.
 — James, & Rose, L., 1253, Screwing bottle necks.
 — James W., 1966, Transmitting telegraphic signals.
 — John H., 4459, Artificial skins.
 — Joseph, 731, Ornamenting vitreous surfaces, &c.
 Brown, Joseph R. (Miller), 98, Treating fatty matters.
 — M. H., 4370, Nose bags.
 Brown, M. H., & White, M. G., 1061, Disinfecting.
 — W., 3640, Rolling metals.
 Brown, W. (Gibson), 1695, Cleats and chocks.
 Brown, W. A., & Woodcock, J. P., 1908, Indicating
 [revolutions].
 — W. Morgan- (Keniston), 5, Boot & shoe fastenings.
 — (Gardner & Pocock), 450, Boots.
 — (Simonds & Ferson), 1282, Tempering.
 — (Callor), 1291, Dressing leather.
 — (Bickford), 1392, Knitting machines.
 — (Lourdel), 1445, Printing music.
 — (Dinsmore), 2383, Stitching & stretch-
 [ing cloth].
 — (Osgood), 2875, Printers' rollers, &c.
 — (Hotchkiss), 2946, Fire-arms.
 — (Ford), 2972, Counteracting motion in
 [berths, &c.].
 Brown, W. Morgan- (Richardson), 2994, Boots and shoes.
 — (Bastie), 3021, Stearine.
 — (Chamberlain), 3110, Transmitting
 [motion].
 — (Hansen), 3148, Preparing china, &c.
 [for metallic deposits].
 — (Gianoli, Piceni & Donna), 3482,
 [Railway breaks].
 — (Mennig & Mennig), 3534, Blowing
 [machines; preparing fibres for felt].
 — (Capen), 3649, Looms.
 — (Fisch), 3732, Soaps.
 — (Ford & Dick), 4104, Suspending, and
 [controlling motion of berths, &c.].
 — (Harding), 4166, Cannon.
 — (Rose & Rose), 4375, Thrashing.
 Browne, A., 1692, Separating tin from scraps or cuttings.
 — (Knapp), 66, Raising sunken vessels.
 — (Foundries & Forges Co.), 220, Iron and steel.
 — (Foundries & Forges Co.), 422, Alloys of iron.
 — (Lenoir), 1520, Asparagus tongs.
 — (Truchot), 2140, Cutting paper.
 — (Guyer), 2801, Bolt and nut lock.
 — (Martiny), 2848, Multiplying figures.
 — (Foundries & Forges Co.), 3396, Alloys of iron.
 — J. C., & Herlert, R., 842, Regulating clocks.
 — J. D., 1803, Power looms.
 — R. J., 816, Obtaining motive-power.
 — S. G., 3373, Steam-engines.
 — S. G., & Hooker, W. D., 3661, Steam-engines;
 [pumps; valves].
 — S. G., & Moore, A., 2675, Pipe wrenches.
 Browne, W. F. (Lake), 3058, Hydrogen gas apparatus, &c.
 Browning, G., 2247, Sewing-machines.
 — T., & Scott, G. J., 2738, Slide-valves.
 Brownlie, W., 3308, Advertising.
 Brown-Westhead, M., 1649, Venetian blind ladders.
 — M., & Smith, R., 2610, Venetian blinds.
 Bruce, W., 4180, Fining, aerating, bottling, &c. beer.
 — W., & Sykes, B., 1318, Bottling & preserving beer.
 Brüks, C. D. C., & Bühringer, J. G. (Schallehn), 2305,
 [Carriage breaks].
 — D. C. (Schallehn), 3872, Wire mattresses & seats.
 Brunot, A. A. (Bonneville), 1004, Distance register.
 Brunt, J., & White, W. A., 3865, Brick-making.
 Brust, J. (Soul), 3885, Coats.
 Bryant, G. R., 3364, Washing wool.
 Bryant, H. H., & Nichols, D. (Haseltine), 3644, Spools.
 Brydon, R., & Davidson, J. S., 1278, Rock boring.
 — R., Davidson, J. S., & Grey, G., 1489, Boring.
 Bubba, M. Del., & Ara, A., 1595, Preserving metals.
 Buchan, A. W., 2180, Shaping clay.
 Buchanan, G., 895, Crushing sugar canes.
 — J., & Vickess, S., 923, Charcoal retorts.
 Buchholz, G. A., 17, Obtaining motive-power.
 — J. A. A., 4170, Treating grain; mills.
 Buckingham, W., 551, Heating buildings and steam-boilers.
 Buckland, E. A. J., & Simpson, W., 1379, Iron ships.
 Buckley, S., 1033, Check pick bracket in looms.
 Bucknall, F., 362, Digging roots and cultivating land.
 Budde, E., 1428, Preserving eggs.
 Budden, E. T., 2661, Belts for cartridges, &c.
 Budenberg, A. (Schäffer & Budenberg), 327, Injectors.
 — (Schäffer & Budenberg), 1709, Liquid meters.
 — (Schäffer & Budenberg), 2631, Gauges.
 Budenberg, C. F., & Schäffer, B. A. (Budenberg), 327,
 [Injectors].
 — C. F., & Schäffer, B. A. (Budenberg), 1709,
 [Liquid meters].
 — C. F., & Schäffer, B. A. (Budenberg), 2631,
 [Gauges].
 Bull, W., 1538, Flame kilns or ovens.

Ball, W., 1625, Hand dredgers or excavators.
 — W., & Bradley, H., 4479, Fare registers.
 — W. R. (Earle), 3772, Ice-creepers.
 Bullivant, W. M., 1159, Telegraph cables.
 — W. M., 3054, Windlasses, capstans, stoppers, &c.
 Bullough, A., & Axon, C., 2777, Railway couplings.
 — J., 177, Sizing and drying yarn.
 — J., & Townson, W., 2400, Collars of throistles, &c.
 — J., & Whitehead, P. O., 1865, Sizing yarn.
 Burch, G., 3967, Hat frames for shaping brims.
 — W., & Thom, A., 3526, Saddles.
 Burden, J., 986, Gauges.
 Burg, J. A. V., 4390, Dynamometers, gauges, balances, &c.
 Burge, G., & Hall, J., 3696, Stone breakers.
 Burgess, C. T. & W. J., 183, Reaping and mowing.
 — C. T. & W. J., 3891, Reaping and mowing.
 — J., & Fenton, A., 3004, Corkscrews.
 — W. J. & C. T., 183, Reaping and mowing.
 — W. J. & C. T., 3891, Reaping and mowing.
 Burkard, A., 2879, Ready reckoning apparatus.
 Burley, W., & Howes, W., 303, Carriage lamps.
 Burling, J., & Todd, H. L., 3818, Trimming wall papers.
 Burlock, F. F. (Johnson), 1813, Eveners for wool cards.
 — F. F. (Johnson), 2584, Weaving tape.
 Burlock, F. F. (Chapman), 3350, Looms.
 Burman, A. R., & De Frece, M., 575, Perfume sprayers.
 Burn, R., 3028, Working railway signals.
 — R., & Green, L. J., 774, Points and signals.
 — R., & Green, L. J., 3185, Railway points and signals.
 Burnett, J., 4167, Removing the "whip" of lappet cloth.
 Burney, G., 3944, Gunpowder magazines.
 Burns, J., & Allan, A., 543, Fastening bale bands.
 Burns, J., & Higgins, C. S. & W. B. (Bonneville), 1271, Water-closets.
 Burnup, J. M. (Barber), 4398, Railway axle-boxes.
 Burrell, J., 2248, Composition for coating ships.
 Burrows, W., & Green, T., 2386, Cutting grass edges.
 Burtinshaw, J., 3202, Oil cans.
 Burton, B., 884, Fire-arms.
 — C. C., 338, Wheels for traction engines.
 — J., 3850, Sprigged or figured net fabrics.
 — R., & Greig, D., 1658, Tramway carriages.
 Bury, W. T., & Muir, A., 1154, Making true mill rolls.
 Büsche, A., 1963, Dress trimmings.
 Bush, M. L. (Lake), 799, Packing chloride of lime.
 Buss, W., & Maplesden, J., 361, Ploughs.
 Bustin, R. (Lake), 962, Fire-escapes.
 — R. (Lake), 2681, Hanging wall paper.
 Butcher, J. J., 1257, Furnaces.
 Butler, J., 3112, Planing and shaping metals.
 — J. W. (Stockwell), 1482, Moulding concrete pipes.
 — J. W. (Stockwell), 2872, Moulding pipes; drilling [rocks].
 — S., 2992, Ornamental single Mecklin lacc.
 Butler, W. A. (Tongue), 1926, Stench traps.
 Butterworth, E., 228, Spinning fibrous substances.
 — E., 1652, Air and gas engines.
 — J., & Dickinson, W., 1655, Looms.
 Buttrick, E., & Co. (Johnson), 2122, Dress patterns.
 Bycroft, H., 2704, pipes.
 — H., 2991, Cooling worts; condensing vapours.
 Byrd, J., 4157, Looms.
 Byrne, St. C. J., 8637, Screw steam barge for towing.
 Byron, G. G. de L., 2888, Cast iron.
 — (Merrill), 2750, Sewing-machines.
 — (Lester), 2751, Fuel.
 — (Godley), 2817, Carriage springs.
 Bywater, W., & Smith, S., 646, Spinning, &c. fibres.

C.

Caffall, R. M., 988, Commodore.
 — R. M., & Thomas, A., 467, Sealing gas mains, &c.
 Cahuc, R., & Soulages, L. (Gray), 3934, Blasting.
 Cailloux, E. (Clark), 2200, Wheels of vehicles.
 Cain, T., 86, Hollow fire-bars.
 Caldwell, S. D. (Lay), 1673, Torpedo boats.
 — W., 4425, Spring safety-valves.
 Callaghan, H., 1197, Benzoline lamps.
 Callender, J. A., 462, Railway signals.
 Caller, J. M. (Morgan-Brown), 1291, Dressing leather.
 Calvert, C. A., 3750, Velocipedes.
 Cambo & Co. (Johnson), 18, Preserving fabrics, wood, &c.
 Cameron, J., 3933, Iron and steel.
 — P., 2852, Portable tables.
 — P., 3204, Portable tables, seats, &c.
 — P., 3614, Desks and tables.
 Camp, A. van, & Clark, G., 33, Pavements.
 — J. P. D. (Knight), 858, Drawing and writing tables.
 — W. A., 1684, Telegraphic signalling.
 Campbell, James, & Gemmill, F., 1895, Furnaces and fines.
 — John, 4005, Combing machines.
 — John, & Somerville, W. C., 538, Mortar mills.
 — John W. & T., & Hunter, J., 3436, Drilling [and planing].
 — T., & J. W., & Hunter, J., 3436, Drilling and [planing].
 — W. H. W. (Smith), 4155, Compound drawing [implement].
 — W. H. W. (Smith), 4204, Drawing compass.
 Campin, F., & Cooper, R. E., 1893, Railway signals, &c.
 Campion, G., 498, Harrows, &c.
 Cancelling Punch Co., Foreign (Lake), 1667, Ticket [punches].
 Candlish, J. B., & Wilson, W. C. (Munk), 2391, Cigars.
 Canning, Sir S., Homfray, W. H., & Joel, H. F., 3147, [Pneumatic signalling].
 Cannon, T., 330, Glue.
 Capen, S. B. (Morgan-Brown), 3649, Looms.
 Capon, L. J. B. (Lacaze), 287, Looms.
 Cardon, J. T., 2998, Breaking, stripping hemp, flax, &c.
 Carlaw, D., 1457, Mangles.
 Carnduff, W., & McHarg, G., 973, Cigars and cigarettes.
 Carobbi, C., & Bellini, G., 961, Air-engines, &c.
 Carpenter, C. (Brewer), 3357, Door knobs.
 Carpenter, J., 916, Railway couplings.
 Carr, T., 3313, Knitting mail healds.
 Carrick, H., & Wardale, J. D., 786, Carrying wheels.
 — J., 1501, Respiratory and inhaling apparatus.
 Carruthers, J. H., & Rankine, D., 966, Tramways; cars.
 — J. H., & Rankine, D., 1143, Tramway carriages.
 Carter, James (Mason), 3878, Barrels.
 — James E., & Pollard, W., 3720, Gas and fluid [regulators].
 — John, 2923, Attaching traces to vehicles.
 — John H., & J. H., 2864, Collecting fares, checks, &c.
 — R., & Ashwin, J., 2121, Fastenings for jewellery.
 — R., & Ashwin, J., 2261, Fastenings for jewellery.
 Casartelli, J. L., 1857, Miners' dials or circumferencers.
 Casella, L. P. & Denton, S. G., 2918, Thermometers.
 Casement, D. T. (Clark), 69, Combustion of fuel, &c.
 — (Clark), 70, Regulating pressure of fluids.
 — (Clark), 351, Combustion of fuel.
 Cass, T., 2793, Furnaces.
 Casthelaz, J., 2009, Treating aniline for colors, &c.
 Cathro, J. J., Girvan, J., & Lecerf, H., 394, Ornamenting [paper].
 Catlow, C., 1622, Looms.
 — C., 1920, Looms.
 Caton, G., 2792, Fire-grates.

- Cattanach, D. D.* (Lake), 423, Gum, &c.
Cattarns, R., 3590, Protecting vessels in collision.
Cave, J. O'C., 3628, Bicycles.
 — *J. O'C.*, 3629, Condensing air for propelling, &c.
 — *J. O'C.*, 4251, Obtaining light and heat.
 — *J. O'C.*, 4269, Motive-power.
 — *J. O'C.*, 4399, Signalling on land and at sea.
Cayce, J. M. (Clark), 1851, Air carburetter and burner.
Chadwick, E., 3475, Railway breaks.
 — *S.*, & *Condon, T. W.*, 3776, Brushes.
 — *T.*, *Sugden, T.*, & *Bradbury, G. F.*, 1823, [Sewing-machines.
Chaffer, J., & *Hawthornthwaite, T.* (Eaton), 3808, Washing [clothes.
Chalk, R., 1432, Fire-grates.
 — *W. H.*, & *Chubb, G. H.*, 320, Safes and doors.
 — *W. H.*, *Chubb, G. H.*, & *Hunter, E.*, 4393, Iron [safes, &c.
Challen, S. W., & *Taylor, J. & J. S.*, 3864, Screw nuts.
Challerton, V. P. (Clark), 781, Excavating peat, &c.
Challis, J., 1552, Thinning and hoeing turnips.
Chalmet, G. (Mewburn), 156, Textile fabrics.
Chamas, J. E., *Bouju, L. D. P.* & *M. R.* (Clark), 3877, [Paper pulp.
Chamberlain, A., & *Smith, J.*, 1551, Pattern plates.
 — *H.*, *Craven, J.*, & *Wedekind, H.* (Hoffmann), [4138, Kilns.
Chamberlain, O. McC., & *Mandelbaum, L. H.* (Tongue), [1525, Transmitting motion on railways.
 — *O. McC.* (Johnson), 2873, Folding fabrics.
 — *O. McC.* (Morgan-Brown), 3110, Trans- [mitting motion.
Chamberlain, R., & *Wagstaff, T.*, 3670, Loops or eyelets.
 — *W. R. B.*, 54, Electro-motive-power.
Chambers, A., 2045, Railway signalling.
 — *A.*, 3676, Ventilating underground railways.
 — *A.*, 4293, Railway signals.
 — *J.*, & *Goldschmidt, P.*, 4002, Loom temples.
 — *R.*, 4289, Cleaning wheat and grain.
 — *T.*, 1750, Agricultural implements.
 — *W.*, *Ayre, A. S.*, *H. H.*, & *W. A.*, 4374, Oil- [cake.
Chandler, C., & *Southan, W. H.*, 2703, Surgical plaisters, &c.
 — *S.*, & *Hulett, D.*, 1287, Gas.
 — *S.*, & *Stevenson, G. W.*, 3252, Gas.
Chandor, J. A. (Leonard), 1480, Ignition fuses.
 — (Leonard), 3717, Ignition fuses.
Chapin, E. P., & *Condit, F.*, 316, Weaving ribbons, &c.
Chapin, H. A., 1292, Spinning and twisting.
 — *H. A.*, 1735, Spinning machinery.
 — *W. B.*, & *Manico, E. J. C.*, 814, Railway breaks.
Chapman, A., & *Sutton, S. G.*, 1281, Sewing-machines.
Chapman, C. H. (Burlock), 3350, Looms.
Chapman, G., 38, Sesqui-carbonate of ammonia.
 — *H.*, 1224, Cooking ranges.
 — *S.*, 3438, Stanchions for railway trucks, &c.
Chappell, J., 3871, Railway couplings.
Charles, P., 353, Controlling supply of water.
Charlton, G. & T., 1228, Plugging boiler tubes.
 — *T. & G.*, 1228, Plugging boiler tubes.
Charpentier, P. E., 4428, Moulding raw sugar.
Charray, E. E. (Lake), 4013, Matches.
Chase, W. H., 1918, Couplings for machine belting.
Chatterton, G., & *Mayor, T.*, 3854, Spinning.
Chatterton, J., 852, Steam generators.
Chatwin, H., 504, Finger boards of pianofortes, &c.
Chaudoir, E. P. (Bonneville), 3273, Jacks.
Chaumont, J. J. A. (Brookes), 1431, Warming carriages.
Chendle, G., 2966, Flooring cramps.
Chedgely, J., 1075, Glass tubes and cylinders.
Cheesbrough, F. J. (Baschwitz), 1503, Spark arresters.
 — (Pooley), 2800, Couplings and buffers.
Cheesbrough (Platts & Walden), 2928, Crimping leather.
 — (Ford), 4381, Steam-boilers.
 — (Ford), 4383, Boiler furnaces.
Chenaillier, P., 2791, Extracting soluble matters from [wood.
Chenot, A. L. S. (Clark), 1676, Forging metals.
Cherry, C. E. & W. P., 3219, Stoppers and bottles.
 — *H.*, 404, Steam pumps.
 — *H.*, 1572, Condensers for steam pumps.
 — *W. P. & C. E.*, 3219, Stoppers and bottles.
Chesebrough, R. A. (Chesebrough), 1012, Treating oils.
 — *R. A.* (Newton), 2451, Antiseptic fertilizer.
Chesebrough, W. H. (Chesebrough), 1012, Treating oils.
Cheshire, J., & *Hill, J.*, 2444, Solitaires and studs.
Chesterman, E. (Haseltine), 2811, Registering fares.
Chevallier, A. (Gedge), 2176, Steam-engines.
Chew, W., *Sutcliffe, J. S.*, & *Smith, J. S.*, 3898, Looms.
Chiffray, A. (Gedge), 3786, Goffering fabrics.
Childs, A. B., 1455, Cleaning grain and seeds.
Chillingworth, F. (Hughes), 1433, Spade bayonets.
Ching, C., 809, Extinguishing fire.
Chiozza, L. (Clark), 480, Treating maize.
Chippindale, I., 318, Sifting cinders.
Chisholm, J., 3601, Mules and twiners.
Chisholm, Bros. (Sears), 846, Dressing millstones.
Chiverton, E., 2506, Lighting gas lamps.
Chomé-Steinbach, F., 1290, Paving-stone.
 — *F.*, 3520, Paving-stone.
Christie, C. J., 3385, Potato-digging machines, &c.
Chubb, G. H., & *Chalk, W. H.*, 320, Safes and doors.
 — *G. H.*, *Hunter, E.*, & *Chalk, W. H.*, 4393, Iron [safes, &c.
Church, G. F., 3060, Air-picking looms,
 — *G. F.*, 3773, Air-picking looms.
Churchill, C. (Tiffany), 4309, Knitting-machines.
Chutaur, T. (Bonneville), 4453, Electric batteries.
 — *T.* (Bonneville), 4454, Motive-power.
Cicognani, J. A. (Podesta), 1800, Desilvering lead.
Clamond, C., 1199, Thermo-electric piles.
Clamond, J. C., & *Gaiffe, L. A.* (Clark), 3420, Electric [battery.
Clapp, W. H., 1950, Telegraphic messages; signals; lamps.
Clark, A. (Ridgway), 1694, Cooling; delivering ale, &c.
 — *A. M.* (Casement), 69, Combustion of fuel, &c.
 — (Casement), 70, Regulating pressure of fluids.
 — (Rogers), 208, Lamp black.
 — (Sawyer), 253, Electric telegraphs.
 — (Morton), 290, Propelling vessels.
 — (La Grove), 292, Mechanical toy.
 — (Pelouze & Audouin), 322, Gas.
 — (Ligny), 323, Drying and heating.
 — (Allin), 350, Cutting and screwing pipes.
 — (Casement), 351, Combustion of fuel.
 — (Tracy & Lawton), 363, Cabinets.
 — (Goodwin), 364, Cutting button holes.
 — (Gschwind & Beberdick), 421, Mouldings.
 — (McKinley), 438, Hoeing, &c.
 — (Chiozza), 480, Treating maize.
 — (Robert), 547, Clocks.
 — (Taft), 780, Knife sharpeners, &c.
 — (Challerton), 781, Excavating peat, &c.
 — (Grut), 875, Hook attachments for dress.
 — (Farley), 876, Drying bone black.
 — (Davies), 952, Signal lanterns.
 — (Cole), 953, Hooks for hats, &c.
 — (D'Infrville & Armstrong), 954, Electric telegraphy.
 — (David), 975, Chains.
 — (Anduze), 990, Coffee mills, &c.
 — (Cook), 1019, Preparing grain for flour.
 — (Bourdais), 1048, Sewing leather.
 — (Dordron, Villeron & Bezingue), 1049, Butter.
 — (Jouret), 1110, Stopping horses.

- Clark (*Kidd*), 1160, Culinary apparatus.
 — (*De Froideville*), 1275, Cartridges, &c.
 — (*Marshall*), 1323, Washing machines, &c.
 — (*Haswell*), 1339, Steam-boilers.
 — (*Doremus*), 1410, Springs.
 — (*Nuttall, Isherwood & Broadbent*), 1539, Looms.
 — (*Toselli*), 1559, Grappling submerged objects, &c.
 — (*Lambert*), 1634, Retouching photographs.
 — (*Chenot*), 1676, Forging metals.
 — (*Trüster*), 1705, Concentrated beer.
 — (*Jackson*), 1760, Suspending crockery in kilns.
 — (*Cayce*), 1851, Air carburetter and burner.
 — (*Malligand & Brossard-Vidal*), 1885, Ebullioscopes.
 — (*Hartog & Co.*), 1900, Breaking, &c. flax.
 — (*Clark*), 1913, Stoppering bottles.
 — (*Farcot & Sons, & Duclos & Co.*), 1934, Governors.
 — (*Cré*), 1995, Printing ink.
 — (*Van Anden*), 1996, Screw nuts.
 — (*Styles, Barney, Valentine & Fox*), 2041, Springs.
 — (*Baillet*), 2188, Papering pins.
 — (*Cailloux*), 2200, Wheels of vehicles.
 — (*Thomas-Anquetil & Grenu*), 2210, Fire-arms.
 — (*Jenty*), 2270, Gas and fuel.
 — (*Taft*), 2271, Sharpening table knives.
 — (*Bliss*), 2366, Making soap bubbles.
 — (*Bozzini*), 2389, Printing fabrics.
 — (*Universal Signal Light Co.*), 2390, Lanterns.
 — (*Bourcart*), 2479, Spinning.
 — (*Miltimore, Phillips & Morris*), 2498, Axles.
 — (*Leydet*), 2555, Preventing radiation of heat.
 — (*Atkinson*), 2563, Steam pumps.
 — (*Tappan*), 2579, Safety lamps.
 — (*Bradford*), 2648, Electro-magnetic governors.
 — (*Wenck & von Briesen*), 2690, Portable fountains.
 — (*Vignet, frères*), 2823, Woven fabrics.
 — (*Hayes & Lathrop*), 2835, Sewing-machines.
 — (*Dathis*), 2951, Conveying merchandise, &c.
 — (*Hanchett*), 3002, Pianofortes.
 — (*Granier*), 3086, Lamps.
 — (*Sherwood*), 3097, Filling bottles, &c.
 — (*Bosquet*), 3100, Capsuling bottles.
 — (*Granier*), 3145, Lamps.
 — (*Scott & Scott*), 3170, Washing machines.
 — (*Dubois*), 3230, Pipes and cigar tubes.
 — (*D'Arincourt*), 3250, Printing telegraphs.
 — (*Gregory*), 3258, Steam-engines.
 — (*Heiligendorfer*), 3259, Furnaces.
 — (*Rogé, Poret, Baffoy & Dupré*), 3392, Preserv-
 — ing wood.
 — (*Michalet & Bourget*), 3401, Embroidering.
 — (*Clamond & GaiFFE*), 3420, Electric battery.
 — (*Hussey*), 3440, Mucilage brushes.
 — (*Hussey*), 3452, Journal bearings.
 — (*Samuel*), 3536, Steam and caloric engines.
 — (*Frue*), 3556, Vanning machines.
 — (*Frost*), 3620, Cutting screw-threads.
 — (*Grawitz*), 3632, Dyeing threads and fabrics.
 — (*Lambert*), 3633, Carbon photographs.
 — (*Sandall*), 3677, Link motions.
 — (*Hussey*), 3678, Axle-boxes.
 — (*Lewis, Bates & Kellogg*), 3713, Paper bags.
 — (*Lortigue*), 3771, Electrical commutator.
 — (*Susini-Ruiseco*), 3852, Cigarettes.
 — (*Chamas, Bouju & Bouju*), 3877, Paper pulp.
 — (*Kastner*), 3879, Musical instruments.
 — (*Sawyer*), 3935, Electric telegraphs.
 — (*Mellon*), 3970, Securing tires on wheels.
 — (*Tiffany & Co.*), 4034, Handles of teapots, &c.
 — (*Sawyer*), 4063, Chemical telegraphs.
 — (*Jucqueau*), 4120, Railways.
 — (*Kastner*), 4162, Musical instruments.
 — (*Brinckerhoff*), 4221, Steam condensers.
 — (*Decoudun*), 4263, Wringing machines.
 — (*Decoudun*), 4264, Washing machines.
 — (*Decoudun*), 4274, Washing machines.
 — (*Toselli*), 4275, Grappling and raising objects.
 — (*Gérard*), 4294, Bobbin net machines.
 — (*Maxwell-Lyte*), 4308, Ammonia.
 — (*Ulmann*), 4356, Buttons, brooches, &c.
 — (*Jenkins & Baylis*), 4426, Needles.
 — (*Decoudun*), 4477, Black lead for stoves.
 — (*Bradford*), 4491, Lithocycles.
 — C. S., 1837, Preserving food.
 — D. K., 1453, Disintegrating substances.
 — E., Taylor, E. J., & Milsted, A., 1231, Fireproof
 — buildings, &c.
 Clark, E. (Clark), 1913, Stoppering bottles.
 Clark, E. P., 49, Teaching military drill.
 — F. W., 2571, Gas.
 — G., & Van Camp, A., 33, Pavements.
 — James, 204, Waterproof garments.
 — James, 3695, Displaying advertisements.
 — James B., 3268, Ships' anchors; hawse holes.
 — John, 1232, Mariners' compasses.
 — John, 1666, Railway breaks.
 — John, 1905, Railway breaks.
 — Josiah L., 2120, Railway breaks.
 — Josiah L., & Hill, E. J., 564, Railway signalling.
 — Josiah L., & Standfield, J., 111, Docks & pontoons.
 — Josiah L., & Standfield, J., 202, Docks & pontoons.
 — Josiah, L., & Standfield, J., 4257, Towing vessels.
 — W., 2293, Railway breaks.
 — W., 2373, Horse clippers.
 — W. (Cosby), 579, Invalid bedsteads.
 — (Lo Forte & Quintaralle), 593, Preventing shifting
 — [of ships' cargoes; rudders.
 — W. (Brand), 3072, Ironing or finishing hats.
 — W. (Granier), 3073, Testing mineral oils, &c.
 Clarke, A. B., 631, Washing machines.
 — F. R., & Hilton, W., 1402, Railway couplings.
 — H., 818, Combination locks.
 — J., 4014, Railway breaks.
 — J. F., 1071, Pneumatic signalling apparatus.
 — J. F., 2660, Distributing water in streets.
 — J. J., 1385, Corset and other fasteners.
 — J. S., 1034, Indicating removal of poison bottles.
 — T., 3339, Treating ores.
 — T., & Smith, E., 4448, Treating ores, minerals, &c.
 — T. A. W., & Donisthorpe, R. F., 1704, Weaving
 — [and craping hair.
 — T. A. W., & Donisthorpe, R. F., 1778, Strands
 — [for plaits, &c.
 — W., & Tallerman, D., 4340, Nutritive drinks.
 — W., & Walker, E., 843, Ships' capstans.
 Clausolles, E. E. P., (Mather), 3910, Measuring liquids;
 — [forcing fluids, &c.
 Clay, J., 3329, Saddles.
 Clayden, S., 2698, Governor gas generator.
 Claye, V. L., & Forgeois, E. S. J. (Spence), 2461, Treat-
 — ing sewage.
 Clayton, F. (Owen), 3050, Slip buckle.
 — H. & H., & Howlett, F., 4455, Steam and air
 — [engines.
 — J. W., 1037, Waterproof paper.
 — N., & Shuttleworth, J., 1142, Portable engines.
 — N., & Shuttleworth, J., 1166, Travelling cranes.
 — R. H., Harrison, J., & Loynd, W., 537, Air pumps.
 — W. I., 1580, Fire-escapes.
 Cleary, W., 3541, Polishing photographs, cards, &c.
 Clegg, E. A., & Hoyle, A., 650, Looms.
 — J., 811, Mules for spinning.
 — J., & Taylor, R., 555, Mules and twiners.
 — T., & Lucas, T., 623, Carding engines.
 — W., 3143, Opening, &c. fibrous materials.

- Cleghorn, J., & Paterson, T. G., 1145, Treating asbestos.
 Cliff, E., & Vose, R. (Lake), 2712, Elliptic springs.
 Cliff, W. D., 2034, Clay retorts.
 Clifford, A., 4020, Metallic tubes.
 Clissold, W., 2285, Joints for securing knobs, handles, &c.
 Clough, J., 4086, Train-signalling on railways.
 — J., 4095, Washing fibres.
 Clubley, H. T., 2534, Bricks, tiles, &c.; artificial fuel.
 Cluderay, T., 2372, Separating substances from beans, &c.
 Coad, T., 2486, Bottle stoppers.
 Coats, P., 469, Re-winding yarn or thread.
 Cochrane, C., & Cowper, E. A., 1623, Hot-blast stoves.
 Cochrane, J., (Lake), 3098, Weaving pile fabrics.
 Cochrane, J. G., & Weild, E., 4055, Drilling, and other [machine tools].
 — T. A., 2445, Economising fuel.
 Cockburn, A., 1964, Bottles; stoppering & filling same.
 Cockburn-Muir, W. J., & Fidler, T. C., 2890, Rail and [tramway rolling stock].
 Cockcroft, W., & Ackroyd, R. (Midgley), 1364, Ring twisters.
 Cockerham, H., 309, Stripe motion of looms.
 Cockey, F. C., & H., 624, Furnace doors.
 — H., & F. C., 624, Furnace doors.
 Cockings, J. S. (Reynolds), 154, Snaps or connectors.
 Codd, H., 3448, Earthenware bottles.
 Coddington, R. (Gally), 3289, Telegraphy.
 Codville, J. (Rawbone), 2327, Seed & manure distributors.
 Cogswell, W. A., & Judson, J. (Haseltine), 4231, Go- [vernors].
 Cohen, B. S., 2780, artificial ivory.
 Cohné, S., 37, Composition for bearings.
 Cohrs, J. H., 142, Railway couplings.
 — J. H., 1250, Railway couplings.
 — J. H., 2672, Railway couplings.
 Coignet, A. (Wise), 4325, Steam pressure regulator.
 Colborne, J., 2107, Sewing-machines.
 Colby, C. C., Currier, J. M., & Gordon, J. F. (Lake), [4109, Harvesters].
 Cole, C. G. (Clark), 953, Hooks for hats, &c.
 Cole, F., 181, Crushing and reducing baryta, cocoa, &c.
 — F., 1401, Raising and lowering window sashes.
 — F., 2456, Crushing baryta, cocoa, sugar, &c.
 — F., 2917, Opening, shutting, &c. window sashes.
 — H. (Klingelhoefer & Co.), 2619, Fire alarm.
 Colebrook, C. T., 1043, Pump valves.
 Coleman, J. A. (Lake), 2065, Protecting buildings from [fire; supplying steam].
 — (Lake), 4230, Protecting and ventilating [buildings and ships].
 Coleman, J. C., & Holman, A., 4377, Printing paper.
 — J. J., 985, Oiling fibres.
 — J. J., 3577, Volatile liquid hydro-carbons.
 Coles, F., 1848, Preserving food; refrigerators.
 — H. J., 753, Fastenings for packing cases.
 — T. E., & Dodge, J., 1122, Furnace bars.
 Colladon, D., & Turrettini, T. B. E. (Barlow), 3038, Rock-boring.
 Collett, T. E., 1549, Constructing fire-proof buildings.
 Colles, A. H., & Bailey, W. H., 3927, Scoring billiards.
 Collett, H., 3924, Watches and time-keepers.
 Colley, E. E., 3826, Printing paper.
 Collicatt, J. (Adams), 333, Kaleidoscopes.
 Collicott, J., 2476, Tube scrapers.
 Collingridge, A. (Folliet & Gally), 374, Axle-boxes.
 Collins, C. W., 651, Working slide-valves.
 — J., 789, Fringing machines.
 Colls, F. W., 2328, Safety valves.
 — F. W., 2330, Sewer and drain traps.
 Colquhoun, J., 4359, Wearing-apparel.
 Colton, I. C. (Klein), 4224, Governors.
 Colver, J., 2157, Carriage poles.
 — J., 4397, Carriage poles.
 Combe, James (Droulers-Vernier), 3943, Hackling ma- [chines].
 — John, 2348, Spinning.
 Combeaud & Granjon (Gedge), 1099, Levels.
 Comery, J., 4185, Cut nails and tacks.
 Commerell, J. E., 3869, Rudders.
 Compton, C. H. (Benson), 3369, Joining metal bands.
 Condit, F., & Chapin, E. P., 316, Weaving ribbons, &c.
 Condit, F. M., Frink, G. A., Foley, J. T., & Crump, J. W. (Newton), 4445, Vaults, &c.
 Condron, T. W., & Chadwick, S., 3776, Brushes.
 Condry, H. B., 4037, Acetate of soda.
 Conger, W. M., 4030, Shields for stoves.
 Conisbee, W., & Smale, J., 739, Printing machines.
 Conklin, G. (Lippincott), 237, Condensed milk.
 Connell, J., 675, Weaving ornamental fabrics.
 Connell, J. S., & Swan, J. H. (Lake), 1243, Water-meters.
 Connell, W., 2274, Water-supply valves.
 Connery, J. W., & Holroyde, W. J. (Holroyde), 2932, [Caulking metallic plates].
 Connor, C. C., 612, Preparing yarns and fibres.
 — F., 3430, Beetling fabrics.
 Conradi, H. (Sack), 2979, Cutting threads on screws, &c.
 Constantine, T. J., & Hearson, C. E., 3088, Cooking.
 Contrell, C. C., & O'Brien, J. T., 3245, Weaving head- [ings for fringes, &c].
 Conybeare, H., & Naphegyi, G., 2106, Zapotine.
 Conyers, E., & Pullein, J., 4198, Depilating skins.
 Cook, E., Bombroffe, J., & Baker, T., 1671, Clay mills.
 — E. A., Crosfield, C. J., & Barrow, J., 2024, [Animal charcoal].
 Cook, H. O. (Haseltine), 2717, Illuminating compass [cards, &c].
 Cook, H. W., 840, Pumping or forcing water, air, gas, &c.
 — H. W., 3371, Propelling vessels.
 — H. W., 3890, Locomotive engines.
 — J., 2096, Railway couplings.
 Cook, O. F. (Clark), 1019, Preparing grain for flour.
 Cooke, J., & Myhill, W. H., 793, Cocks or taps.
 — J. S., Irving, W., & Howarth, F., 2477, Looms.
 — R., 1346, Ruling machines.
 — R. (Cooke), 708, Sewing-machine attachments.
 — R. F., 3321, Horse-shoes.
 Cooke, W. (Cooke), 708, Sewing-machine attachments.
 — W. O., & Foss, J. M. (Lake), 3712, Regulating [draft in locomotives].
 Coombe, J. C., 1344, Pig iron.
 Cooper, C., 417, Working railway points.
 — H. E., 2404, Carburetting air or gas.
 — J., Goulding, W., & Greenhalgh, J., 2697, Open- [ing, &c. fibres].
 — R. E., & Campin, F., 1893, Railway signals, &c.
 — W., 3082, Rotary steam-engine and pump.
 Cooper, W. (Roddey), 4041, Bale-ties.
 Cope, E., & Maxwell, J. R. (Benson), 1086, Steam-engines.
 Cope, E., & Maxwell, J. R. (Benson), 3361, Steam or [air-compressing engines].
 Copeland, G. W., & Ballou, F. D. (Lake), 3886, Boots and shoes.
 — G. W., & Ballou, F. D. (Lake), 4078, Lasting [boots].
 Coppin, W., 402, Construction of ships.
 Copping, R., & Walworth, J., 2067, Preparing wheat for [grinding].
 Corbett, A. F., 568, Artificial fuel.
 — S., 2282, Raising potatoes, thinning turnips, &c.
 Corbitt, C. J., 1235, Bags, &c.
 — W., 3283, Cooking ranges.
 Corder, W., & Foster, J. A., 804, Umbrellas; parasols.
 — W., & Shore, E., 1928, Umbrellas; parasols.
 Cordes, B., Suarés, S. L., & Fonsèque, D. F. (Espir), [510, Cutting down trees].

Cordurie, J. M. V., & Anthony, E. L. H. C. D. T.
 [(Haddan), 2708, Treating sulphides, oxides, &c.
Corey, J. W. (Spence), 4481, Hats.
Corkran, J. F. (Archbald), 87, Manures.
Corliss, T. G. (Lake), 1993, Clothes wringers.
Cornely, E. (Gedge), 107, Embroidering machines.
Cornes, C., & Appleby, C. J., 1284, Governors and
 [steam-boilers.
Cornez, Houdart, Mason, & Co. (Newton), 1347, Furnaces.
Corpe, C. W., 141, Construction of concrete buildings.
Correy, F. (Johnson), 1740, Steam-engines.
Corrigan, J., & Stubbs, J., 4061, Winding yarns.
Corron, C. (Sauvée), 2982, Dyeing.
Corroyer, A. N. (Desoutter), 2535, Spring mattresses, &c.
Cosby, O. G. (Clark), 579, Invalid bedsteads.
Côté, L. (Lake), 2974, Heel counters or stiffeners.
 — (Lake), 3726, Boots and shoes.
Cotter, W., 1, Combined folding bedstead and air-bed.
 — W., 2369, Stair-tread and paving-block.
 — W., 2545, Advertising or decorating.
Cottingham, G. W. (Lake), 1730, Ironing machines.
Cottingham, J., 791, Straw elevators.
Cotton, F. M., & Field, E., 2474, Steam-engines.
 — J. A., 1471, Asphalte pavements.
 — W., 713, Knitted fabrics.
 — W., 3409, Looped fabrics.
Couhault, M. J. B., 2764, Clipping horses.
Coultas, J. & J. P., 2141, Seed and manure drills.
 — J. P. & J., 2141, Seed and manure drills.
Coulter, A., 1994, Railway carriage couplings.
Cour, P. la (Jensen), 2999, Transmitting, &c. telegraphic
 [messages.
Courbier, A., & Villalard, E. N. (Sourzac), 3092, Driving
 [bands.
Court, J., 2405, Kitcheners.
Court, W., Barton, R. C., & Alexander, R. H. (Newton),
 [2729, Fish hooks.
Courtenay, R. H., 2179, Induction coils.
Courtois, C., 1609, Clipping and shearing animals.
Couteau, L. A. (Bonneville), 2362, Sowing potatoes.
Couvreux, A. (Johnson), 2472, Dredging apparatus.
Coventry, H. H., 4379, Stoves.
Cowan, J., & Wanchope, A., 1338, Gas.
 — W., & Warner, W. J., 1698, Gas meters.
Cowell, M. H., 1688, Playing cards.
Cowins, R. H., 1588, Railway signalling.
Cowley, I., 3412, Cutting oil cakes.
Cowling, T., Pearson, C., & Dean, J., 1818, Screw gills.
Cowper, E. A., 1108, Clearing and smoothing yarn, &c.
 — E. A., 1679, Clearing and smoothing yarn, &c.
 — E. A., 3705, Paper.
 — E. A., & Cochrane, C., 1623, Hot-blast stoves.
Cox, F., 1702, Attaching door handles to spindles.
 — J. C., 8130, Indicating and registering money.
 — R., 1696, Sawing stone, marble and granite.
 — R. R., 1156, Chimney caps and wind guards.
 — S. G., 520, Pills.
 — T. H., & Small, J. H., 2139, Ticket binder.
 — W., 115, Sacks or bags.
 — W., 4438, Harness saddles.
Coxhead, C. J., 2039, Pianofortes.
 — F. C., 2655, Opening and closing doors in ships.
Coxon, J. N., 2193, Steam-engine valves and ports.
Coyne, J. (Imray), 4116, Assorting nails.
Crabtree, W., Bottomley, W. H., & Naylor, J., 1439, Looms.
Cracknell, E. C., Holt, Hon. T., & Garran, A. (Lloyd),
 [2385, Blasting cartridges.
Cracknell, H. W., 692, Sash fasteners.
Craig, A. F. & J., & Strathern, A. M., 3494, Motive-power.
 — J. & A. F., & Strathern, A. M., 3494, Motive-power.
 — R., 2602, Paper-making.
 — T., 3550, Tramway track clearers.

Craig, W., & Brevoort, H. L. (Wilson), 2059, Valves.
Crain, F. E., Everitt, J., & Richards, P. W. (Hunt),
 [2987, Packing.
Cramp, A. H., 2840, Combined smoothing & fluting iron.
 — A. H., 3146, Button fastener.
 — C. C., 407, Tramway apparatus.
 — C. C., 491, Tramways.
Crane, W. W. (Barber), 2342, Bearings and journal-boxes.
 — (Barber), 2343, Hubs or axle-boxes.
Cranston, W. McL., 3691, Reaping machines.
 — W. McL., & the *Walter A. Wood Mowing &*
 [Reaping Machine Co., 2564, Reaping machines.
Craps, J., & Derihon, J. (Reintjens), 529, Non-conducting
 [mastic.
Craven, J., Wedekind, H., & Chamberlain, H. (Hoffmann),
 [4138, Kilns.
 — W., & Bollé, C., 4335, Sawing & cutting metals.
Crawford, A., 1390, Waterclosets.
 — J., 3278, Fenders.
 — T., & Russell, E. N., 2611, Telescopic joints.
Cré, E. (Clark), 1995, Printing ink.
Cressey, T. S., 3731, Treating malt.
Cribb, W., & Rackham, J., 770, Matches.
Crickmer, R. H., 1097, Motion indicators and governors.
Crighton, S., & Murray, T., 3422, Earthenware bottles.
Crighton, W., & Drabble, J., 4022, Mules.
Crisp, B. H., 1234, Preventing injuries in railway collisions.
Croasdale, B. R., 2187, Bag for phosphates, saltpetre, &c.
Croft, J., McG., 2437, Ships' propellers.
Crombie, G., & Somerville, G., 365, Cutting paper, &c.
Crook, W., & Priestman, E., 1592, Combing fibres.
 — W., & Priestman, E., 3388, Combing fibres.
Crookes, W., 1152, Artificial manures.
Cropper, H. S., 3238, Motive-power.
Crossfield, C. J., Barrow, J., & Cook, E. A., 2024,
 [Animal charcoal.
Crosland, J. S., 151, Economizing fuel, &c. in furnaces.
 — J. S., 1814, Economizers for heating feed water.
 — R. F., 4317, Cards for carding-engines.
 — W., 1838, Bronzing or powdering papers.
 — W., 4023, Bronzing papers, &c.
Cross, A. T. (Henry), 3470, Pencil cases, &c.
Crosskill, T. A., & Marshall, W., 118, Wringing and
 [mangling.
Crossley, F. W., 3205, Gas motor engines.
 — L. J., Hanson, R., & Hicks, J. J., 4111, Water-
 [gauges.
Crow, G. A., 1544, Shaping metals.
Crowl, W. C., 3211, Pulverizing or dividing guano, &c.
Crowley, J., 1483, Raising and lowering weights, &c.
 — J., & Blaiberg, S., 881, Life-boats.
Cruickshank, A. B., 89, Cleats for sailing boats.
Crump, J. W., Condit, F. M., Frink, G. A., & Foley, J. T.
 [(Newton), 4445, Vaults, &c.
Cuau, H., & Vabe, P. (Johnson), 3807, Raising liquids.
Cuffley, E. J. (known as West), 906, Telescopes.
Cullen, J., 4186, Safety fittings for steam-boilers.
Cullis, O., 1158, Railway fog signals.
Culmer, W. T., 1138, Varnish and paint brushes.
Culver, C. E., & Foster, J. H. (Lake), 3662, Nailing boxes.
Cunningham, D., & Douglas, A., 336, Scotch bonnets.
 — D., & Douglas, A., 896, Scotch bonnets.
 — W., 1887, Carding engines.
Curie, P., 2079, Anthracene.
Currer, R., 2724, Signalling on railways.
Currier, J. M., Colby, C. C., & Gordon, J. F. (Lake),
 [4109, Harvesters.
Curtis, D., & Gilman, H. (Tongue), 1299, Harness lining.
Curtis, F., 1660, Sewing-machines.
 — (Williams & Page), 24, Lamps.
 — (Mac Martin), 1594, Agricultural implements.
 — (Hosmer), 3941, Darning stockings.

Curtis, W. J., 502, Railway points.
Cushing, M. A. (Lake), 1403, Fire-places, &c.
 Cutler, D., 3679, Solitaires, sleeve links, studs, &c.
 — F. M., & Norwood, G. (*Murphy*), 3888, Dress [protectors].
 — G., & Newman, J., 2503, Buttons.
 Cutts, H. T., & Dean, J., 1506, Check actions for blinds.

D.

Dack, W. N., 1025, Steam-engines, &c.
 — W. N., 3922, Presses, steam-engines and pumps.
 Daddow, S. H., 1558, Fuses for mining and blasting.
 Daglish, G. H. & R., 924, Grinding and smoothing glass.
 — G. H. & R. 2652, Grinding and polishing glass.
 — R. & G. H., 924, Grinding and smoothing glass.
 — R. & G. H., 2652, Grinding and polishing glass.
 Dahne, F. W., 3978, Separating metals.
 Daimler, G. W. (Abel), 414, Gas motor engines.
 — (Abel), 605, Gas motor engines.
 Dakers, J., 3449, Four-wheeled carriages.
 Dale, F. L. V., & Vandenweghe, A., 4098, Children's [carriages].
 Dalzell, J. B., 560, Signalling on railways.
 Dänkoehler, J. A. H. (Tongue), 505, Preserving meat.
 Danchell, F. L. H., 2048, Treating peat.
 Danet, G. A., & Feuillant, X. C. E., 1007, Preserving food.
 Daniel, W., & Greig, D., 3535, Engines and boilers for [winding, &c].
 Danks, J. R., & Walker, R. P., 2960, Cut nails.
 Dann, J. T. (*Gervais*), 530, Cooking utensils.
 — (*Flürscheim & Baumeister*), 1983, Lighting and [extinguishing gas].
 Darby, C. E., & Green, J., 3858, Blast furnaces.
 Dargue, W., & Ellison, G., 590, Railway breaks & signals.
 Darlaston, W., & Hawkins, W., 3292, Furnaces.
 Darley, W., 2782, Raising sunken vessels, &c.
 Darlington, J., 1724, Percussive engines.
 Darlow, W., 1121, Surgical trusses, splints, &c.
 — W., & Fairfax, H., 4406, Pills.
 Dart, W., 1611, Screw-thread cutter.
 Darwin, S. B., 1787, Lining or coating iron pipes.
 Dathis, L. (Clark), 2951, Conveying merchandise, &c.
 Daudenart, L. G. G., & Verbert, E. (Hughes), 911, [Baryta and strontia].
 — L. G. G., & Verbert, E. (Hughes), 913, [Treating liquors used in cleaning wool].
 Dauge, F. (Hughes), 1335, Paper bags.
 Davenport, M., 4211, Carriage door fastenings.
 — W., 3842, Regulating tension of wires.
 Davey, H., 1943, Working the valves of steam-engines.
 — J., 705, Ploughs.
 — S., & Watson, J., 2641, Cartridges.
 David, A. (Ray), 100, Optical illusions.
 — A. O. (Clark), 975, Chains.
 David, J., 1454, Substitute for white and red lead.
 Davidson, A., & Goldstein, B., 3261, Motive-power.
 — J. S., & Brydon, R., 1278, Rock-boring.
 — J. S., Grey, G., & Brydon, R., 1489, Boring.
 Davies, D., 88, Steam-boilers.
 — D., 104, Governors.
 — D., Edwards, D., & Jones, P., 1417, Terne plates.
 — E., Thurley, J. W., & Newell, J., 4338, Peat [fuel, &c].
 — G., & Lees, W., 1042, Fringing fabrics; weaving.
 — G. (*Smith*), 1883, Hydraulic presses.
 — H. D., 400, Roads and roadways.

Davies, I., 413, Separating "black plate."
 — J. L., & Rumsey, W. E., 2058, Lubricators.
 Davies, T. A. (Clark), 952, Signal lanterns.
 Davies, W., 2687, Working ships' pumps.
 — W. H., & Higgins, F. H. W., 640, Telegraphs.
 — W. H., & Higgins, F. H. W., 2478, Telegraphs.
 Daville, R. S. (*Webster & Webster*), 2647, Sewing machines.
 Davis, B. W., & Parsons, J., 3887, Letter-press printing.
 — D. L., 4460, Cleaning boots and shoes.
 — H. A., 4042, Safety apparatus for hoists.
 — H. T., 4403, Traps for sinks, drains, &c.
 — J. W., & Strauss, L., 2560, Fastening pockets.
 Davison, D. (Newton), 919, Gas retorts.
 Davison, J., 4164, Removing dead centres in crank shafts.
 — W., & Betteley, J. H., 2276, Checking fares, &c.
 Dawber, J., 928, Preventing the slipping of railway wheels.
 — J., 1070, Fire-bars; bridges; heating feed-water.
 — T., 900, Heating railway carriages.
 Dawes, W., & Holt, H. P., 1726, Cutting metallic plates.
 — W., & Holt, H. P., 1728, Steam-engines.
 — W., & Holt, H. P., 2239, Cutting grass plot edges.
 Dawson, A., 1305, Ornamenting warp lace.
 — D., & Slater, C., 633, Dyeing.
 — J. & T. G., 1845, Printing.
 — R., 3328, Shuttle tips.
 — T. G. & J., 1845, Printing.
 — W., 3532, Shuttles and pickers.
 Day, Job, & Osgerby, W. W., 2519, Removing incrusta-
 — John, 1221, Thrashing machines. [tion].
 Day, M. (Lake), 1261, Electric-light apparatus.
 Day, St. J. V. (*Weston*), 772, Centrifugal machines.
 — (*Henderson*), 1267, Iron and steel; furnaces.
 — (*Eichbaum*), 3281, Gas.
 Deacon, H., 163, Effecting decomposition of gases.
 Deal, G., Lillywhite, G., Launders, A. O., & Weeks, [A. W. G., 1754, Hot-water apparatus].
 Dean, E. H., 2223, Collecting and elevating cut crops.
 — John, & Cutts, H. T., 1506, Check-actions for blinds.
 — Joseph, Cowling, T., & Pearson, C., 1818, Screw gills.
 Dean, S., Smith, W. H., & Merrell, H. (Haseltine), 2001, [Millstones].
 Deane, T., 3007, Artificial marble.
 Dear, S., 1153, Drawing and spinning fibres.
 Dearden, M. A., 4449, Bedstead furniture.
 D'Arlinecourt, L. C. A. J. G. (Clark), 3250, Printing [telegraphs].
 Dearman, R., 397, Saving fuel and consuming smoke.
 De Beauregard, F. A. Testud, 1069, Packing.
 De Beaurepaire, L. R. R. de Louvigny, Comte, 591, Alcohol.
 — L. R. R. de Louvigny, Comte, 4450, Re-
 [gulating exhaust steam for heating, &c].
 Debenham, W. E., 2490, Fixing colors on photographs, &c.
 De Bisschop, A. (Newton), 1910, Motive-power.
 De Brockofsky, G. (Bousfield), 1247, Rotary engines.
 Déchamp, C. (Sauvée), 1917, Steam-boilers.
 Decoudun, E. (Clark), 4477, Black lead for stoves.
 — J. (Clark), 4263, Wringing machines.
 — (Clark), 4264, Washing-machines.
 — (Clark), 4274, Washing-machines.
 De Echeverria, J., Bazan, F., & Mégy, L., 3656, Speed [regulators].
 De Fever, C., 209, Sowing and planting.
 De Frece, M., & Burman, A. R., 575, Perfume sprayers.
 De Fresne, E. L. J. E. (Bousfield), 2388, Propelling ships.
 Defries, H., 2166, Lamp burners.
 — H., 3749, Lamps.
 De Froideville, L. T. (Clark), 1275, Cartridges, &c.
 De Garrs, H., 3942, Skates.
 Deguine, C., 2983, Hearths.
 De Hemptinne, A. F., 2807, Sulphuric acid.
 D'Homergue, L. C. (Rawson), 1448, Heating furnaces.

- D'Humy, P. R. de F., 2929, Call bell.
D'Infreville, G., & Armstrong, W. N. (Clark), 954, [Electric telegraphy].
 Deiss, A. A., 147, Extracting quinine from bark.
 De la Bastie, F. B. A. R., 2788, Tempering glass.
 De Lalande, F., 2841, Alizarine.
 Delalot, S. L., 802, White metal.
Delannoy et fils (Mewburn), 2301, Combing machines.
 De Lara, D., & Sewell, H. T., 3266, Preventing injury [to vessels].
Delarue, P. A. E. (Palmer), 786, Shirt-front waistcoat.
 De la Rue, W. W., & Shaw, W. T., 311, Date indicators.
 Delavigne, N. A., 56, Corkscrews.
 Del-Bubbe, M., & Ara, A., 1595, Preserving metals.
 Deleenaer, J., 2912, Umbrella tip caps.
 Deléon, J., 525, Building materials, &c.
 De Liancourt, C. A., Count de G., 909, Swimming belt.
 ——— C. A., Count de G., 3599, Life belts.
De Louvigny, L. R. R., Comte de Beaurepaire, 591, Alcohol.
 ——— L. R. R., Comte de Beaurepaire, 4450, [Regulating exhaust steam for heating, &c].
De Loynes, V. E. (Johnson), 1916, Filtering liquids.
 Delpech, E. P., 4287, Carbonic acid gas fire-engine.
 Deluy, J. B., 4108, Disinfecting and preventing in- [crustation].
 De Mattos, W. S., 1325, Railway couplings.
De Méritens, A. (Johnson), 5431, Tanning.
 ——— A., & Kresser, V. (Henry), 1132, Sugar.
De Mersanne, F. E. (Johnson), 1446, Electric light.
De Mestre, A. (Bonneville), 683, Wiring bottles.
 ——— J. A. (Bonneville), 3271, Securing bottle corks.
 ——— (Bonneville), 3272, Corking bottles.
 De Montois, J. L., 2746, Treating skins.
 ——— J. L., 4267, Tanning skins and hides.
 De Mornay, F., 2787, Centrifugal machines.
Denayrouze, L. (Applegarth), 2015, Tubes for divers.
 Denning, C., 1440, Haymaking machines.
 ——— C. & S. H., 2325, Agricultural drills.
 ——— S. H. & C., 2325, Agricultural drills.
Denio, A. O., & Lobdell, G. G. (Johnson) 1409, Boilers [and furnaces].
 Dennis, T. H. P., 431, Water-waste preventers.
 ——— T. H. P., 1797, Supplying air to stoves, furnaces, &c.
 Dennison, A. L., 1113, Watches, clocks, &c.
 De Nomaion, S., 1874, Treating mineral coals by acids.
 Denton, J., 1130, Treating animal charcoal.
 ——— S. G., & Casella, L. P., 2918, Thermometers.
 Deny, L., 16, Perforating metal plates.
 De Findray, A., 1719, Furnaces.
 ——— A., 2876, Steam-boilers.
 Derihon, J., & Craps, J. (*Reintjens*), 529, Non-conducting [mastic].
 Der Mey, S. C. van (*Ansingh*), 1933, Preventing railway [collisions].
 Derry, J. D., 185, Lamp and candle holders.
 Der Straten, E. van, 2526, Heating and lighting.
 De Savignac, J. D., 2279, Vaginal injection canula.
Desoutter, V. J. (Corroyer), 2535, Spring mattresses, &c.
 De Souza, M. A., 3698, Counting apparatus.
 ——— M. A., 3700, Cutting tobacco.
 ——— M. A., 3702, Bread-making.
 Despaquis, P. A., 3947, Gelatine, &c., photographic plates.
Desterbecq, L. (Senier & Harwood), 3265, Crimping, &c. [fabrics].
De Susini-Ruiseco, Count J. (Clark), 3852, Cigarettes.
De Terbecq, V. F. L., Count H. (Vaughan), 1644, [Phosphates of lime].
 ——— V. F. L., Count H. (Vaughan), 2168, [Phosphates of lime].
 Dethiou, L. H., 542, Buckles.
Devallée & Shene (Whitehead), 2796, Gill-boxes.
Devaux, C. (Dufrené), 2776, Vapour baths.
Devlan, P. S. (Bonneville), 767, Packing journal-boxes.
 ——— (Bonneville), 3051, Propelling vessels.
 Devoe, B. G., & Walker, W. L., 4093, Metallic fences.
 De Vogt, H. C., 81, Navigating the air.
Devriès, M. (Tongue), 4361, Splints for repairing [shafts, &c].
De Vrij, J. E. (Blews), 1534, Purifying quinoidine.
 Dewar, J., 1105, Ships' berths, mess tables, &c.
 De Weerd, R. van, 245, Producing motive power.
 Dewynter, C. (*Lenoir*), 430, Purifying gas.
 De Zuccato, E., 1078, Copying writings, &c.
 ——— E., 3150, Copying writings, &c.
 Dicey, W. T. Y., 1976, Steam and sailing vessels.
 Dick, A. (*Schmitz*), 926, Furnace fire-bars.
 ——— R., 4482, Boots and shoes.
Dick, T. S., & Ford, T. P. (Morgan-Brown), 4104, Sus- [pending berths, &c].
 Dickie, J., 4169, Window guards.
 Dickens, A. L. & T., & Heywood, H., 2658, Dyeing yarns.
 ——— T. & A. L., & Heywood, H., 2658, Dyeing yarns.
 Dickinson, A. F., & Parkinson, W., 3991, Looms.
 ——— W., & Butterworth, J., 1655, Looms.
 Dickson, J. F., 3745, Preserving animal substances.
Diderichsen, E. (Brewer), 661, Artificial butter.
 Digby, E. T., Gandy, C., Foyl, W., James, E. B. A., & [Livesey, J. J.], 2799, Extract of meat.
 Dilkes, J., Hall, J., & Goldsmith, G., 2627, Printing types, &c.
 Dillon, T. A., 1935, Copying and indexing records.
Dinant, F. (Allcard), 4307, Packing butter.
 Dingley, G., 1675, Regulating combustion in furnaces.
Dinsmore, A. S. (Morgan-Brown), 2383, Stitching and [stretching cloth].
 Diss, A., 2109, Wheels.
Diston, H. (Johnson), 2412, Saws and handles.
 Ditchfield, W., Knowles, J., & Shaw H., 1462, Weaving.
 Dittenhoefer, M., 2785, Combs.
 Dix, A. M., 582, Propelling vehicles.
 Dixon, A., 3804, Gauge cocks.
 ——— Frederic, 3880, Artificial fuel.
 ——— Frederick, 2409, Disinfecting sewer gases.
 ——— G., 950, Rope yarns.
 Dobbie, R., & Forbes, P., 2353, Cooking ranges.
Dobson, James & John (Barlow), 11, Carding wool.
 ——— John & James (Barlow), 11, Carding wool.
 Dobson, T., 1956, Radiating axle boxes.
 Dockrell, H., 1608, Applying stamps to envelopes, &c.
 Dodd, J., 2899, Mules.
 Dodds, M., 3396, Picks.
 Dodge, James, 3829, Forcing air and gases.
 ——— James, & Mather, W., 2022, Steam generators.
 ——— John, & Coles, T. E., 1122, Furnace bars.
 Dods, R., 2925, Portable and other forges.
 Dodshon, W., 2091, Railway carriages.
 Dodwell, R. V., 764, Electric signals.
 Dollander, E., & Lancaster, W., 1569, Sizing yarns, &c.
 Dolman, G. W., & Benjamin, B., 1134, Indicators.
 Donald, W., & Peters, S., 1207, Waterclosets.
 Done, H. A., 1018, Glove fasteners.
 Donisthorpe, A. R. & G. E., White, G., & Toon, J., 171, [Woollen yarns].
 ——— G. E. & A. R., White, G., & Toon, J., 171, [Woollen yarns].
 ——— R. F., & Clarke, T. A. W., 1704, Weaving [and craping hair].
 ——— R. F., & Clarke, T. A. W., 1778, Strands [for plaits, &c].
Donna, G., Gianoli, G., Piceni G. (Morgan-Brown), [3482, Railway breaks].
Donnelly, W. (Lake), 1128, Ploughs.
Donner, J. O. (Newton), 3553, Sugar, &c.
 Donnison, F. & F. H., 3322, Web printing machines.
 ——— F. H. & F., 3322, Web printing machines.

Dordron, L., Villeron, A., & Bezing, J. A. (Clark),
[1049, Butter.

Dore, J., 3709, Railway carriage lamps.

Doremus, W. T. (Clark), 1410, Springs.

Dorman, W. H., 3748, Attaching buttons.

Dorn, C. F., 3116, Goods and cattle trucks for railways.

Doty, H. H., 2170, Signalling at sea.

— H. H., 3605, Railway carriage lamps.

Douce, B. (Peres), 3327, Paper bag machines.

Douglas, A., & Cunningham, D., 336, Scotch bonnets.

— A., & Cunningham, D., 896, Scotch bonnets.

Dove, W., 725, Liquid measures.

Dover, G., & Swainson, G. F., 3184, Horse-shoes.

Dowland, W. H., 3963, Sockets for bolts, &c.; socket
[covers.

Dowler, T. W., & Smith, J., 2688, Jewellery and dress
[fastenings.

Downs, J., 1270, Hydraulic presses for seed-crushing, &c.

Drabble, J., & Crighton, W., 4022, Mules.

Dramburg, L., & Kleinpell, K. (Wirth), 2206, Bearings.

— L., & Kleinpell, K. (Wirth), 2614, Motive power.

Dransfield, J., & Jubb, C., 3391, Feeding fibres.

Draper, E. G., Unwin, J., & Brook, H. J., 1492, Electro-
[plating.

— E. G., Unwin, J., & Brook, H. J., 2454, De-
[positing metals.

Draper, G. & W. F., & Booth, J. B., 1835, Spinning, &c.

— W. F. & G., & Booth, J. B., 1835, Spinning, &c.

Drechsler, F. J., 133, Winnowing machines.

Drewett, W., 2216, Blocking hats and bonnets.

Dreyer, J. H. R., Schipmann, H., & Taylor, W., 1575,
[Sewing-machines and shuttles.

Driscoll, C., 3084, Ventilating rooms.

Dronier, P., & Voisin, J. A., 1169, Producing light.

Droulers-Vernier, P. C. F. J. (Combe), 3943, Hackling
[machines.

Drouot, A., & Durand, F., 2231, Moulding bricks.

Druce, F. H., 3069, Discharging or ejecting liquids.

— G. F., & Steers, R., 1537, Screws; screw-drivers.

— G. F., & Steers, R., 1653, Horse-shoes.

Drury, G. J., 3574, Boots, shoes, &c.

Dryden, J. A., & Tandy, G. G., 347, Lamps.

— J. A., & Tandy, G. G., 1952, Lamps.

Dubbin, D., 3874, Chair and table.

Dubois, P. (Gedge), 4301, Smoke consumers.

Dubois, A. (Clark), 3230, Pipes and cigar tubes.

— E. A. (Vaughan), 246, Air-gas.

— G., & François, J. (Lake), 4190, Compressing air.

Dübs, H., 3737, Steam-engines.

Duckett, G., & Mercer, T., 4, Size.

Duclos, E. & Co., & Farcot & Sons (Clark), 1934,
[Governors.

Dudgeon, A., 20, Utilizing heat of furnaces.

— A., 22, Peat-fuel.

Dufrené, H. A. (Pernod), 1074, Treating madder.

— (Tellier), 2770, Preserving substances.

— (Devauz), 2776, Vapour baths.

— (Lelievre), 2971, Motive-power.

Dugard, W. H., 4126, Steam-engine valves.

Duke, J. J., 3987, Alarm for scaring birds.

Duley, J. T. (Marriott), 976, Artificial fuel.

Du Motay, C. M. T., 4172, Treating silk.

Duncan, J., 1989, Treating sugar and cane juice.

— (Weinrich), 1870, Treating sugar.

— J. T. (Hunt), 546, Precipitating metallic copper.

Duncombe, Honble. C., 3138, Spray generator and in-
[jector.

Dunkley, J. H., 741, Piano-fortes.

Dunlop, A., 657, Endless railways and wheels.

— A., 3254, Steam-boilers.

— J. W., 820, Fire and burglar-proof buildings.

Dunn, A., 2175, Roadways.

Dunn, J., 3906, Paper-ruling machines.

— W. W., 503, Drilling rock.

Dunning, G., & George, C. B. (Haseltine), 2475, Horse-
[shoes.

Dupont, E., 1947, Metal musical wind instruments.

Duport, L., 2144, Hot-air stoves.

Dupré, P. S. E., Rogé, H. N., Poret, E., & Baffoy, P. H.
[Clark), 3392, Preserving wood.

Dupuis, J. H., & Lietar, B. (Murdoch), 4271, Screw taps.

Durand, A., 2656, Reproducing designs.

— F., & Drouot, A., 2231, Moulding bricks.

Durr, A. (Lenègre), 2769, Bevilling cardboard edges.

Dutton, S. T., 230, Railway points.

Duval, J. (Jensen), 13, Fire-arms.

Dyer, E., 328, Fire-escapes.

Dyk, H. van, 199, Dressing and travelling bags.

Dynamite Manufacturing Co., Rhenish (Gottheil), 1566,
[Blasting compound.

Dyson, G., 3394, Wearing apparel.

— G. W., 122, Rolling metals, &c.

— G. W., & Ward, E. T., 2183, Utilizing old rails.

E.

Eadington, P., Parkinson, J., & Morgan, H., 4121, Weigh-
[ing machines.

Eaglesham, J., & Rigg, H., 2171, Cutting, hauling coal.

Eames, C. J. (Bonneville), 4346, Iron and steel.

Earl, H., 2768, Reaping and binding machines.

Earle, R. H. (Bull), 3772, Ice-creeper.

Earnshaw, E., & Holt, T., 3841, Steam-engines.

Eastman, T., 1245, Hair-pins.

Easton, A., Pritchard, W. W., & McGaw, S., 2958,
[Embroidering.

— W., & Tattersall, F., 248, Moulding bricks, &c.

Eastwick, E. P. (Johnson), 1846, Artificial yeast powder.

Eastwood, A. J. & J., & Ainsworth, R., 2485, Furnace
[dampers.

— C., 826, Bottles and stoppers.

— D., 186, Looms for weaving.

— F., & Garside, J., 3032, Air valve for churns.

— J. & A. J., & Ainsworth, R., 2485, Furnace
[dampers.

— T. C., & Little, G., 762, Combing fibres.

— T. C., & Little, G., 3213, Preparing and comb-
[ing fibres.

Eaton, J., 2731, Stretching hat bodies.

Eaton, J. (Hawsworth & Chaffer), 3808, Washing
[clothes.

Eddison, J. C., 2967, Consuming smoke and economising
[fuel.

Edey, J., & Lindblad, J. A., 2604, Buffer springs.

Edge, J. S., 4050, Fire-arms.

— N., & Trevor, W., 1789, Looms.

Edgerton, N. H. (Beck), 3366, Oxygen & hydrogen gases.

Edwards, D., Jones, P., & Davies, D., 1417, Terne plates.

— D. O., 2295, Ventilating.

— Edmund, 1861, Separating substances of dif-
[ferent gravities.

— Edmund, 3342, Reciprocating engines.

— Edmund, 3604, Theatrical illusions.

— Edmund (Freeland), 3766, Soap.

— Eliezer, & Wilkins, W., 2222, Attaching knobs
[to spindles.

— G., 1133, Railway breaks.

— G., 2098, Railway breaks and couplings.

— G., & Stocker, A. S., 3461, Bottles & stoppers.

Edwards, J., 384, Valves.
 — J., 1511, Railway brakes.
 — J., 1617, Stopping and filling bottles.
 — J., 3173, Drawing liquids from casks.
 — J., 3626, Railway breaks.
 — J., 3815, Bottles and stoppers.
 — S., 3617, Chaff-cutting; pulping roots.
 Edwards, S., & Erichsen, E. J. (Jensen), 138, Vats, &c.
 — W., & Alsing, J. R., 2587, Pulverizing.
 Echeverria, J. de, Bazan, F., & Mégy, L., 3656, Speed [regulators].
 Egerton, P., 617, Mounting spindles.
 Eichbaum, F. H. (Day), 3281, Gas.
 Elder, G. F., 670, Doubling fabrics.
 — H., 481, Railway breaks.
 Elias, D., 2577, Taps for aerated beverages.
 Elie, L., 1192, Pulp strainers.
 Ellinor, G., Harrison, J., & Freeston, T. A., 3665, Iron [and steel].
 Elliott, G. W., 1635, Sewing-machines.
 Ellis, G. H., 1021, Boot-cleaning machines.
 — J. E., & Redgate, E., 172, Treating hides and skins.
 — R., 4437, Aerated and mineral waters.
 — W., & Taylor, E., 3654, Umbrella furniture.
 Ellison, G., & Dargue, W., 590, Railway breaks & signals.
 — W., & Ward, S., 3162, Chain locks.
 Elmer, W. (Newton), 2495, Gas.
 Elsom, W. (Pultz & Walkley), 1577, Eyelets.
 Elsdon, R., 3280, Iron fences.
 — R., & Ayres, R. H., 3497, Iron houses.
 Else, G. E., 2711, Valves or cocks.
 Elworthy, R. P. (Morgan), 4188, Steam-boiler furnaces.
 Emery, A. C., 2562, Waterclosets.
 Emmens, S. H., 3609, Extracting metals.
 Empson, F., 835, Railway signals.
 — W., & Palmer, W., 2337, Covered buttons.
 Emsley, S., 696, Spinning and twisting fibres.
 — S., & Peel, J., 47, Looms.
 — S., & Peel, J., 632, Looms and pickers.
 — S., & Smith, S., 4069, Spinning and twisting.
 Emalie, J. T., 40, Registering omnibus passengers.
 Enamel Co., American (Haseltine), 4486, Pipes.
 Engel, E., 3496, Metal cartridges.
 Engetsdorff, W., 3144, Coloring matters; producing [designs on fabrics].
 Enoult, A., & Varinet, J. (Abel), 184, Dressing fabrics.
 Enright, J. F., 3785, Self-disconnecting hook.
 Enterprise Manufacturing Co. (Hunt), 606, Mills.
 Entwistle, E., 859, Railway signals.
 — E., 3201, Railway signals.
 — E., 3298, Suspenders or bearers for rods, &c.
 Erichsen, E. J. (Jensen), 1052, Gas.
 — E. J., & Edwards, S. (Jensen), 138, Vats, &c.
 — E. J., & Maardt, J. G. (Jensen), 1072, Producing [ing and utilising gas and heat].
 Eskrett, C., 1101, Seed or oil cakes.
 — C., 2664, Seed or oil cakes.
 Espeut, W. B., 2825, Evaporating cane-juice, &c.
 — W. B., 2826, Expressing juice from sugar cane, &c.
 — W. B., 3295, Evaporating solutions.
 — W. B., 3589, Animal charcoal.
 Espir, C. (Suarés, Fonsèque & Cordes), 510, Cutting [down trees].
 Essen, W. S. von, 492, Cleaning steam-boiler tubes.
 Essex, H. (Lake), 2259, Hot-blast apparatus.
 Eustace, M., 1766, Jointing and tightening wires.
 — M., 3172, Jointing and tightening wires.
 Evans, A., 4260, Trunks, deed boxes, cash boxes, &c.
 — D., & Heydon, T., 844, Burr stone grinding mills.
 — James, 1094, Bending metal for tubes.
 — Joseph, 969, Anvils.
 — Joseph, 3938, Pumps.

Evans, J. W. (Lake), 3918, Ratchet-brace.
 Evans, P. C., 1057, Condensing carding, &c. engines.
 — P. C., 3780, Feeding fibres.
 — T. (Hampson), 3985, "Fishing" railway rails.
 — W., 2931, Furnaces.
 — W. R., 3367, Metal pavement gratings.
 Evens, T., & Heath, T. E. & T. E., 3446, Fuel.
 Everett, G. A. (Brooks), 500, Liquid meters.
 Everitt, E. E., & North, H. (Johnson), 1990, Bedsteads.
 — J., Richards, P. W., & Crain, F. E., (Hunt), [2987, Packing].
 Everitt, W., 1880, Indicating revolutions of shafts.
 Ewell, C., Howes, S., & Babcock, A. & N. (Lake), 1898, [Purifying and grading middlings].
 Eyre, G., 164, Convertible school desks and seats.
 — G., 4256, Warming and ventilating.
 Eysautier, J. P. & P. M. J. (Salomons), 2601, Trim- [ming fabrics].
 — P. M. J. & J. P. (Salomons), 2601, Trim- [ming fabrics].
 Eyth, M., & Greig, D., 527, Towing machinery.
 — M., & Greig, D., 1265, Steam ploughs, &c.
 Ezard, C., 3458, Heating buildings.

F.

Fabas, O. M. (Gedge), 1193, Boilers for heating liquids.
 Faddy, P., 1974, Locks for boxes and doors.
 Fagnus, A. & Co. (Altendorf), 3353, Fire-arms.
 Fairburn, J., 3892, Extracting metals.
 — R., 4395, Combing fibres.
 Fairfax, H., & Darlow, W., 4406, Pills.
 Fairlie, J. M., 2102, Treating fruit or vegetable juices.
 Faivre, C. (Johnson), 3802, Motive-power.
 Fallows, J. T., Marlow, J. B., & Roebuck, J., 274, Rail- [way points].
 — W. L., & Lester, R., 2007, Puddling furnaces.
 Fanning, J., & Nugent, E., 191, Screws.
 Farcot & Sons, & Duclos, E. & Co. (Clark), 1934, [Governors].
 Farjon, L. A. (Brookes), 2667, Copying presses.
 Farley, P. (Clark), 876, Drying bone black.
 Farley, R., & Taylor, G., 3760, Casting chilled rolls.
 Farmer, James, 655, Finishing printed sheets of paper.
 — John, & Ronald, B., 1215, Supplying water to [closets, &c].
 — John S., 3495, Signals.
 — John S., 3569, Railway points and signals.
 — John S., & Tyer, E., 2423, Railway signals.
 Farnsworth, S., & Sansom, S., 4096, Casting metals.
 Farquhar, J. F. C., 112, Gas-burners.
 Farran, J., 899, Weaving and cutting velvets.
 Farrant, R. E., 1751, Starch for finishing woven fabrics.
 Farrar, J. & Whiting, L. (Hamer & Giles), 2881, Moulds.
 Farrer, H. L., & Hamlyn, R., 2888, Tanning hides.
 Farrer, W. B., 3183, Machine guns.
 Fussell, E. S., & Hill, G. W. (Lake), 1389, Lubricators.
 Faucheur, L. C. E. (Henry), 2488, Treating residua in [distilling, &c].
 Faulkner, J., 4203, Tramways.
 Faure, C. A., & French, G., 3781, Explosive compounds.
 — C. A., French, G., & Mackie, S. J., 2062, Explo- [sive compounds].
 — C. A., French, G., & Mackie, S. J., 3612, Explo- [sive compounds].
 Favier, V., 2985, Thrashing machine beaters.

- Fawcett, S. T. & Simpson, J., 3270, Perambulators.
 — T. C., 2827, Brick-making and pressing.
 — W., 2000, Transferring designs on wood, &c.
 Fayol, A., 1475, Preventing candles guttering.
 Fearnley, W. G., 1423, Heating ovens.
 Fearn, F. H., & Jackson, W., 2481, Gas stoves.
 Fehrmann, L. (Abel), 1326, Traction springs.
 — L. (Abel), 2505, Traction springs.
 Feldtrappe, H., 2260, Neckties.
 Fell, J. & T., 1328, Looms.
 — T. & J., 1328, Looms.
 Fellows, N., 2653, Scent fountain.
 Felton, J. E., 4389, Motive-power.
 Fenby, J. B., 1090, Vessels for the infusion of coffee, &c.
 Fenton, A., & Burgess, J., 3004, Corkscrews.
 — W., & Knowles, E., 2296, Doffer condensers.
 Ferguson, F. T. (Benson), 426, Pipe tongs and cutters.
 Ferrari, A., 2056, Traps for rats, &c.
 Ferroux, C. (Bousfield), 680, Rock-drilling machines.
 Person, J. A., & Simonds, G. F., 2099, Tempering.
 Person, J. A., & Simonds, G. F. (Morgan-Brown), 1282, [Tempering].
 — J. A., & Simonds, G. F. (Jensen), 4332, Tem-
 [pering].
 Festing, A. M., 2011, Blind pulleys.
 Feuillant, X. C. E., & Danet, G. A., 1007, Preserving food.
 Fever, C. de, 209, Sowing and planting.
 Fewkes, J. T. (Lake), 1555, Anchors.
 Fidler, T. C., & Cockburn-Muir, W. J., 2890, Rail and
 [tramway rolling stock].
 Field, A., & Wuenschmann, R., 1682, Mould candles.
 — E., & Cotton, F. M., 2474, Steam-engines.
 Fielden, S., Aitchison, A., & Gaukroger, J., 2618, Gas.
 Fielding, J., 788, Pumping engines, &c.
 — J. E. & T., 3580, Looms.
 — T. & J. E., 3580, Looms.
 Finch, B., 2499, Valves for tanks.
 — B., 3555, Lavatory basins.
 Finger, L., 298, Electro-magnetic annunciators.
 — L., 1779, Electro-magnetic annunciators.
 Finlayson, D., 805, Grain and malt shovels.
 Firman, H. S. (Lake), 2419, Rendering fatty substances.
 Fisch, A. (Morgan-Brown), 3732, Soaps.
 Fisher, D., 1602, Water and other meters.
 — E., 2595, Belt and brace buckles.
 — J. L., 2093, Dry closets.
 Fison, J. P., 2092, Thrashing machines.
 Fitzgerald, D. G., & Molloy, B. C., 266, White lead.
 Fitzpatrick, M., & Allen, H., 1737, Deadening shocks, &c.
 Fleming, F., 2592, Driving belt.
 — G. S., 120, Caps for candles when burning.
 — G. S., 3374, Candlesticks.
 Fletcher, G., 3844, Sugar.
 — R., 2227, Window sash holders.
 Flood, R. F., 2943, Domestic fire-escapes.
 Flower, P. W., 2957, Pickling and coating iron plates.
 Floyd, J. R. (Lake), 679, Gas-retort joints.
 Flürscheim, M., & Baumeister, L. (Dann), 1983, Light-
 [ing and extinguishing gas].
 Flynt, O. P., 3718, Ladies' garments.
 Fobes, D. (Wells), 2561, Hook for threading needles.
 Foden, E., 3692, Steam-boilers.
 Fogarty, T. B., 3792, Carburetting air.
 Foley, J. T., Crump, J. W., Condit, F. M., & Frink, G. A.
 (Newton), 4445, Vaults, &c.
 Folk, D. C., & McCloskey, J. (Newton), 4128, Sewing-
 [machines].
 — J. E., & Wilson, C. F. (Newton), 458, Bolsters
 [and bearings for spindles].
 Folliet, L., & Gally, M. (Collingridge), 374, Axle-boxes.
 Fonsique, D. F., Cordes, B., & Suarés, S. L. (Espir),
 [510, Cutting down trees].
 Foote, T. M., & Randall, C. A. (Newton), 2539 Chemi-
 [cal telegraphs].
 Footner, H., 3701, Preventing accidents on railways.
 Forbes, G. H., 26, Gas making.
 — G. H., 28, Fuel.
 — G. H., 34, Cements, plaster and artificial fuel.
 — G. H., 231, Purifying gas; artificial fuel.
 — G. H., 232, Purifying gas.
 — G. H., 800, Fuel and gas.
 — G. H., 1200, Utilising foul lime of gas works.
 — G. H., 1391, Utilising refuse lime of gas works.
 — G. H., 2374, Cements.
 — G. H., 2572, Gas.
 — G. H., 2822, Cement.
 — G. H., 3182, Cements.
 — G. H., 3232, Compounds for fuel and quick lime.
 — G. H., 3340, Cement.
 — G. H., 3876, Artificial fuel.
 Forbes, I. R. (Parkman), 3379, Lamps or lanterns.
 Forbes, P., & Dobbie, R., 2353, Cooking ranges.
 Ford, A., 269, Cleansing cotton waste.
 — A., 4150, Cleaning cotton waste.
 — J., 1894, Working tell-tale signals and switches.
 — S., 486, Actuating prime movers.
 Ford, T. P. (Morgan-Brown), 2972, Counteracting mo-
 [tion in berths, &c].
 — T. P., & Dick, T. S. (Morgan-Brown), 4104, Sus-
 [pending berths, &c].
 — W. C. (Cheesbrough), 4381, Steam-boilers.
 — (Cheesbrough), 4383, Boiler furnaces.
 Foreign Cancelling Punch Co. (Lake), 1667, Ticket
 [punches].
 Forgeois, E. S. J., & Claye, V. L. (Spence), 2461,
 [Treating sewage].
 Forges & Foundries Co. (Browne), 220, Iron and steel.
 — (Browne), 422, Alloys of iron.
 — (Browne), 3396, Alloys of iron.
 Forquenot, V. (Johnson), 3779, Slide-valves.
 Forte, R. Lo, & Quintaralle, R. (Clark), 593, Preventing
 [shifting of ships' cargoes; rudders].
 Foss, J. M., & Cooke, W. O. (Lake), 3712, Regulating
 [draft in locomotives].
 Foster, B., & Nield, S., 914, Prussiates of potash, &c.
 — B., & Nield, S., 2624, Prussiates of potash, &c.
 — E., 4234, Taps and valves.
 — J., & Whitaker, W., 143, Cleaning reed dents.
 — J. A., & Corder, W., 804, Umbrellas and parasols.
 Foster, J. H., & Culver, C. E. (Lake), 3662, Nailing boxes.
 Foster, J. K. J., 2989, Extinguishing fire; distributing
 [water].
 Foster, M. (Abel), 2488, Furnaces.
 Fottrell, J., 77, Artificial stone pipes and tubes.
 Foulis, W., 153, Charging retorts.
 — W., 3486, Puddling iron.
 — W., 3487, Charging and drawing retorts.
 Foundries & Forges Co. (Browne), 220, Iron and steel.
 — (Browne), 422, Alloys of iron.
 — (Browne), 3396, Alloys of iron.
 Fourer, R. (Kleinau), 782, Copying presses.
 Fourlinnie, E. (Lacordaire), 4168, Condensing steam.
 Fowler, A. M., 2299, Privies and waterclosets.
 — A. M., & Husband, R., 1528, Waterclosets.
 — G., 943, Tipping coal.
 — J. A., Prestige, J. T., & Preston, F. P. & E. J.,
 [3917, Pumps].
 Fowlic, J. F., 2, Harness.
 Fox, A. D., Styles, J., Barney, G. A., & Valentine, P.
 (Clark), 2041, Springs.
 Fox, F. W., 82, Combing fibres.
 — H. B., 2467, Boots and shoes.
 — H. B., 3546, Bottle stoppers.
 — I., & Wright, T., 3903, Fabric for various purposes.

Fox, S., 1484, Umbrella ribs, &c.
 — S., 1485, Rolling steel for making wire.
 — S., 1486, Steel girders and railway rails.
 — T., 257, Spring mattresses.
 Foyl, W., James, E. B. A., Digby, E. T., Gandy, C., & [Livesey, J. J., 2799, Extract of meat.
 France, E., 3875, Boots and shoes.
 Francis, G., 3616, Pocket theodolite and stand.
 François, J., & Dubois, G. (Lake), 4190, Compressing air.
 Frankenburg, L., 1650, Waterproofing leather.
 Frankenstein, P., 484, Waterproof overcoats.
 Frati, C., 3817, Mechanical organs or orchestreons.
 Frece, M. de, & Burman, A. R., 575, Perfume sprayers.
 Freeland, R. (Edwards), 3766, Soap.
 Freeston, T. A., Ellinor, G., & Harrison, John, 3665, [Iron and steel.
 Freestone, J. W., & Payne, G., 1541, Night lights.
 Frémy, P., 3020, Fire escapes.
 French, B., 2249, Lubricating compounds.
 Fresno, E. L. J. E. de (Bousfield), 2388, Propelling ships.
 Freund, A. L., 607, Cooking apparatus and utensils.
 — A. L., 2849, Domestic cooking.
 Friedmann, A., 873, Heating boilers of steam ships.
 Frink, G. A., Foley, J. T., Crump, J. W., & Condit, F. M. [(Newton), 4445, Vaults, &c.
 Froggatt, W., & Ballard, J., 3855, Bottle-stoppers.
 Fröhlich, A., & Steffen, C., 1341, Steam-boilers.
 Froideville, L. T. de (Clark), 1275, Cartridges, &c.
 Frölich, F. S. (Hald), 1770, Preserving milk and cream.
 Fromage, L., 2636, Braces.
 Froat, F. D., 3957, Heckling fibres.
 — F. D., 4324, Heckling or preparing hemp.
 — H., 1619, Fluid-meters, water-power engines, &c.
 Frost, N. W. (Clark), 3620, Cutting screw-threads.
 Froud, J. W., & Benham, A., 836, Ice-safes.
 Frue, W. B. (Clark), 3556, Vanning machines.
 Fry, T., W. H., & T. J., 3411, Vallances and draperies.
 — T. J., T., & W. H., 3411, Vallances and draperies.
 — W. H., T. J., & T., 3411, Vallances and draperies.
 Fryer, A., 1774, Generating steam.
 — A., & Alliot, J. B., 1773, Drying and cooling.
 — C. E., 3652, Preserving fish.
 — C. E., 3653, Preserving fish.
 — J. C., & Hodgson, N., 1258, Horse-shoes.
 Fulton, J., & Brown, D. (Haseltine), 1054, Sheep-shears.
 Funkenstein, J., & Zysel, F., 1984, Cooking utensils.
 Furnell, H. (Wirth), 1508, Steam-boilers.
 Furness, G., 3287, Cocks and valves.
 Fyfe, A. L., 2234, Ladies' belts.
 — D. A., & Bowers, W. H., 4112, Recovering alkali.
 — W. W., 1016, Hydraulic rams.

G.

Gabriel, J. S., 1819, Paving roads and ways.
 Gadd, W., 2333, Perambulators.
 Gaddum, T., 1618, Separating silk fibres from cocoons.
 Gaffard, P. A. (Tongue), 1839, Indelible ink.
 Gaiffe, L. A., & Clamond, J. C. (Clark), 3420, Electric [battery.
 Gailard, L. J. P. E. (Touaillon), 519, Stopping teeth.
 Gaillet, E. (Bonneville), 4347, Hydrostatic motor.
 Gallahue, A. C. (Newton), 1796, Rotary engines.
 Galland, N. J. (Barlow), 678, Brewing.
 — (Barlow), 1988, Malting.
 Gallico, A. (Stella), 1404, Extracting and refining copper.
 Gally, M. (Kingsley), 964, Telegraphs.
 — (Coddington), 3289, Telegraphy.
 — M., & Folliet, L. (Collingridge), 874, Axle-boxes.

Gambette, F., 1880, Water-wheels.
 Gamboni, P., 2185, Pumps for forcing air or water.
 Gamgee, J., & Purkis, R. A., 2621, Refrigerating.
 Gandy, C., Foye, W., James, E. B. A., Digby, E. T., & [Livesey, J. J., 2799, Extract of meat.
 — M., 3188, Driving bands, belts or straps.
 Gard, W. G., 3502, Preventing escape of noxious gases.
 Gardner, C. F., & Pocock, E. (Morgan-Brown), 450, [Boots.
 — E. R. (Lake), 1512, Inhaling apparatus.
 Gardner, H. (Bollmann), 3126, Grinding metals, &c.
 — H. (Broadwell), 3399, Cannons and projectiles.
 — S., Gething, W., & Jenkins, D., 779, Metal plates.
 — W., 2358, Training hops.
 Garland, H. P., 3043, Sewing-machines.
 — H. P., & Gove, A. J., 4225, Sewing-machines.
 Garlon, F., 3061, Wheel plates of carriages.
 Garnett, T., & Leyland, S., 2909, Earth-closets.
 — W., 3512, Saddles.
 Garrad, W., 1739, Attaching handles to coffins, drawers, &c.
 Garran, A., Cracknell, E. C., & Holt, Hon. T. (Lloyd), [2385, Blasting cartridges.
 Garrett, F., & Hudson, C., 930, Thrashing machines.
 Garre, H. de, 3942, Skates.
 Garside, J., & Eastwood, F., 8082, Air valve for churns.
 Garton, W., 508, Treating grains or spent malt.
 — W., 3950, Making sugar for brewing, &c.
 Gartside, J. H., & Bradbury, C. T., 2492, Woven fabrics.
 Gaskell, James & John, 1345, Castor bowls, knobs, &c.
 — John & James, 1345, Castor bowls, knobs, &c.
 Gatwood, E., & Spencer, G., 1220, Cases for buffer springs.
 Gauchot, H. (Stearns), 2819, Match boxes.
 Gaudefroy, C. (Gedge), 2732, Asphaltic fabric.
 — C. (Gedge), 2733, Quilted fabric.
 Gaukroger, J., Fielden, S., & Aitchison, A., 2618, Gas.
 Gauthy, M. M. E. (Johnson), 8822, Cartridges, &c.
 Gay, R., & Kneebone, S., 2965, Retaining pawl for pulleys.
 Gaylord, E. (Henderson), 2110, Fire-arms.
 Gear, A. S. (Lake), 999, Dressing stone.
 Geasen, H. van (Lake), 1556, Label for cloth.
 Gebauer, F., 321, Hydraulic mangles.
 Gedge, W. E. (Bradley Window Co.), 91, Ventilating [window.
 — (Cornely), 107, Embroidering machines.
 — (Renard), 130, Steam generators.
 — (Liotard), 242, Gas-burners.
 — (Baymé), 808, Stopping bottles.
 — (Granjon & Combeaud), 1099, Levels.
 — (Molinier), 1190, Tawing or dressing skins.
 — (Hivonnait), 1191, Crushing and preparing food.
 — (Fabas), 1193, Boilers for heating liquids.
 — (Bret), 1679, Traction engines.
 — (Rigaux), 1678, Cutting laces and thongs.
 — (Bonjour), 2124, Testing alcohol.
 — (Montegut & Barou), 2125, Carriage doors.
 — (Chevallier), 2176, Steam-engines.
 — (Lepet & Co.), 2514, Metal furnaces.
 — (Pierson), 2588, Solar compasses.
 — (Gaudefroy), 2732, Asphaltic fabric.
 — (Gaudefroy), 2733, Quilted fabric.
 — (Sorieul), 3077, Bellows and blast engines.
 — (Mayoux), 3078, Cemented lithographic stones.
 — (Redon & Co.), 3376, Motive-power.
 — (Redon & Co.), 3406, Coffee mills, &c.
 — (Jacob), 3407, Motive-power "multiplier."
 — (Granjon), 3499, Portable tables, bedsteads, &c.
 — (Pierson), 3530, Car axle-boxes, &c.
 — (Granjon), 3634, Conduits or pipes.
 — (Guellon & Co.), 3724, Plates, slabs and tiles.
 — (Chiffroy), 3786, Goffering fabrics.
 — (Schmitz), 3803, Screw-cutter or stock.
 — (Duboin), 4301, Smoke consumers.

- Gedge (*Besseling*), 4422, Railways.
 — (*Beaudet*), 4423, Tannin.
 — (*Granjon*), 4424, Corking bottles.
 Gemmill, F., & Campbell, J., 1895, Furnaces and flues.
 Geneste, P. E., Herscher, C. G. & E. (Johnson), 3047, [Compressing gaseous fluids].
 Gent, J. T., 4300, Signalling apparatus.
 George, C. B., & Dunning, G. (Haseltine), 2475, Horse-shoes.
 George, Richard, 3317, Flowerpots, troughs; plant-holders.
 — Robert, 949, Taps, valves and stopcocks.
 Gérard, J. (Clark), 4294, Bobbin-net machines.
 Gereke, K. L. H., & Neuber, C., 1531, Gas-regulators.
 Gerhard, F. W., 367, Purifying iron ores.
 Gervais, A. (Dann), 530, Cooking utensils.
 Gessert, T., & Auerbach, G., 1269, Alizarin; isopurpurin.
 Gething, E. & W., Jenkins, D., & Gilbertson, A., 3312, [Terne plates].
 — W., Jenkins, D., & Gardner, S., 779, Metal plates.
 — W. & E., Jenkins, D., & Gilbertson, A., 3312, [Terne plates].
 Geßler, H., 1111, Obtaining fac-similes of letters, &c.
 Giampietro, E., 1010, Artificial tympanums.
 Gianoli, G., Piceni, G., & Donna, G. (Morgan-Brown), 3482, Railway breaks.
 Gibbons, W., & Metcalf, A. (Watts), 3517, Valves.
 Gibbs, G. C., 3159, Preparing and cleaning fibres.
 — G. C., 3214, Dyeing and colouring felt, &c.
 — W. A., 50, Drying apparatus.
 Gibson, A. T. (*Brown*), 1695, Cleats and chocks.
 Gibson, H. W., & Sons (Jensen), 273, Wood-working.
 Gibson, J. W., Kennedy, J. P., & Prior, A., 1516, Tobacco and oil.
 — W., 435, Furniture castors.
 — W., 1600, Engine governors.
 — W., 2868, Mule spindles.
 Giebertmann, R., 2547, Superphosphate of lime and manures.
 Giffard, H. (Henry), 2882, Carriages.
 Gilbee, W. A. (*Boethius*), 354, Cork-cutting machinery.
 Gilbert, W., & Leonardt, F., 434, Pen and other boxes.
 Gilbertson, A., Gething, E. & W., & Jenkins, D., 3312, [Terne plates].
 Giles, A., & Hamer, W. (*Farrar & Whiting*), 2881, [Moulds].
 Gill, C. H., & F.N.G., 3333, Treating saccharine solutions.
 — C. H., & Martineau, G., 3332, Purifying sugar [solutions].
 — D., 4363, Relieving drains of foul gases.
 — F. N. G., & C. H., 3333, Treating saccharine [solutions].
 — H. J., 1945, Finishing printed sheets of paper.
 — J., 1238, Pressing bricks.
 — J., & Lowe, C., 1435, Separating coal tar products.
 — R., 3558, Looms.
 Gilles, F. G. (Gottheil), 25, Gas-engines.
 Gillett, D. C., 2528, Saving life at sea.
 Gillibrand, R. T., 3579, Looms.
 Gilman, H., & Curtis, D. (Tongue), 1299, Harness lining.
 Girard, C. A. (Thomas), 2347, Blue-coloring matter.
 Girdwood, H. M., 4376, Spinning machinery.
 Girdwood, J. (Hunt), 4153, Clarifying cane juices, &c.
 Girvan, J., Cathro, J. J., & Lecerf, H., 394, Ornamenting [paper].
 Gittins, T. H., 2725, Storehouses for petroleum, &c.
 Glamann, J. H., Michelsens, C. A. D. W., & Sieber, C. A., (Newton), 2525, Smoke-burning.
 Gledhill, G. (Hunt), 700, Bottles and stoppers.
 Glover, F. R. A., 2196, Bridling anchor cables.
 — H., 346, Sulphuric acid.
 — M., 2638, Cutting wood.
 Goater, J., 552, Fireproof safes.
 Gobiet, A. (Johnson), 2512, Coke ovens.
 Goddard, B., 3011, Decanting aerated beverages.
 Godfrey, C. (Lake), 968, Screw-propeller shafts.
 Godley, G. (Byron), 2817, Carriage springs.
 Gold, R. S., 524, Hats.
 Golden, W. M., 2326, Adjusting chairs.
 Goldschmidt, P., & Chambers, J., 4002, Loom temples.
 Goldsmith, G., Dilkes, J., & Nall, J., 2627, Printing [types, &c.].
 Goldstein, B., & Davidson, A., 3261, Motive-power.
 Goldstone, C., Radcliffe, J., & Gray, M., 3381, Signalling [in trains].
 — C., Radcliffe, J., Gray, M., & Preece, W. H., [3521, Communicating in trains].
 Gombert, J. (Hughes), 1350, System of locomotion.
 Good, G., 4362, Sail-making, &c.
 Goodall, R., 848, Purifying water or sewage.
 — R., 1826, Clarifying sewage water; artificial fuel.
 — R., 4158, Treating sewage.
 Gooday, G. O., 1862, Horse-hoes.
 Goodbehere, T., Brooks, S., & Harrison, G., 1502, Spinning and doubling.
 Gooder, L., & Kilburn, R., 3980, Milling machines.
 Goodman, G. H., 2993, Breaking stone, &c.
 Goodwin, C. R. (Clark), 364, Cutting button-holes.
 Goodyear, C., & Mills, D., 2414, Boots and shoes.
 Goold, G., 813, Cocks or valves.
 Gordon, J. F., Currier, J. M., & Colby, C. C. (Lake), [4109, Harvesters].
 Gorges, E. V. J. L. (Tongue), 3946, Preserving substances.
 Gorman, C. S., 1971, Making sulphate of potash.
 Goss, J., & Savage, F., 1209, Hoes.
 Gossage, F. H., 1348, Iron.
 Gosselin, L. F., 514, Swimming jackets.
 — L. F., 2678, Buoy for saving gold, &c.
 — L. F., 2679, Swimming jacket or waistcoat.
 Gossi, M. (Newton), 3716, Gunpowder magazines.
 Gottheil, R. (Oesten), 6, Measuring heat of fluids in pipes.
 — (Mehl), 21, Treating wool.
 — (Gilles), 25, Gas-engines.
 — (Lemmens), 36, Dyeing warps.
 — (Schmitt), 757, Knitting machines.
 — (Stumpf), 1308, Measuring supply of water.
 — (Berlin-Anhalt Machine Manufacturing Co.), [1565, Heated air-motors].
 — (Rhenish Dynamite Manufacturing Co.), 1566, [Blasting compound].
 Goucher, J., 2784, Thrashing machines.
 Goulas & Co. (Johnson), 3893, Tubular wooden articles.
 Goulding, W., 405, Furniture, &c.
 — W., Greenhalgh, J., & Cooper, J., 2697, Opening, &c., fibres.
 Gouverneur, J., & Hamilton, J. B., 443, Musical instruments.
 Gove, A. J., 4226, Sewing-machines.
 — A. J., & Garland, H. P., 4225, Sewing-machines.
 Gowan, E. D., & Heale, H. W., 2017, Taps or valves.
 Gowans, C., 2941, Embossing presses.
 Gower, G. G. W. Sutherland-Leveson- (Duke of Sutherland), 319, Steam cultivators.
 Graham, W. H., 1259, Bottle stoppers.
 Granier, E. (Clark), 3073, Testing mineral oils, &c.
 — (Clark), 3086, Lamps.
 — (Clark), 3145, Lamps.
 Granjon & Combeaud (Gedge), 1099, Levels.
 — J. B. (Gedge), 3499, Portable tables, bedsteads, &c.
 — (Gedge), 3634, Conduits or pipes.
 — (Gedge), 4424, Corking bottles.
 Grantham, J., 1240, Tramway cars.
 — J., 1383, Tramway cars.
 Graves, T., & Malam, W., 3240, Treating hydro-carbons [for heating, &c.].

- Grawitz, W. J. S.* (Clark), 3632, Dyeing threads and [fabrics].
Gray, E. (Johnson), 2646, Transmitting musical tones.
Gray, J. McK., 3552, Lessening oscillations in "Bessemer" saloons, &c.
 — *J. W.* (*Cahuc & Soulages*), 3934, Blasting.
 — *M.*, Goldstone, C., & Radcliffe, J., 3381, Signalling [in trains].
 — *M.*, Preece, W. H., Goldstone, C., & Radcliffe, J., 3521, Communicating in trains.
 — *R.*, & Taylor, F. B. (*Selden*), 2772, Chains, couplings, &c.
 — *T. H.*, 4322, Preparing paper-pulp.
Greathead, J. H., 1738, Tubular tunnels or subways.
Greaves, H., 938, Looms.
Greely, B. I. (Snow), 2834, Braces and suspenders.
Green, G., 3413, Earth-closet, cinder-sieve, &c.
 — *H. T.*, & Price, C. W., 29, Railway breaks.
 — *Jonathan*, & *Darby, C. E.*, 3858, Blast-furnaces.
 — *Joseph*, & *Hirst, J. G.*, 3234, Morticing machines.
 — *L. J.*, & *Burn, R.*, 774, Points and signals.
 — *L. J.*, & *Burn, R.*, 8185, Railway points & signals.
 — *T.*, & *Burrows, W.*, 2386, Cutting grass edges.
Greenacre, T., 3672, Screws of liquid-meters.
Greene, J. D., 785, Fire-arms and cartridge holders.
Greener, H., 268, Glass letters and figures.
 — *W. W.*, 3090, Guns and rifles.
Greenhalgh, J., *Cooper, J.*, & *Goulding, W.*, 2697, Opening, &c. fibres.
Greening, J. & N., 2019, Wire belting.
 — *N. & J.*, 2019, Wire belting.
Greenslade, J., 1241, Steam-ploughing machinery.
Greenwood, A., & *Keats, J. & A.*, 620, Sewing boots, &c.
 — *A.*, & *Horsfall, W.*, 2266, Horse-shoes.
 — *A.*, & *Horsfall, W.*, 3141, Nuts and bolts.
 — *A.* (*Vogel*), 3142, Screw-nuts.
 — *F. A.*, & *Asquith, S. E.*, 2803, Spinning.
 — *H. B.*, 3089, Operating clocks or time-keepers.
 — *James*, & *Balme, S.*, 2469, Looms.
 — *John*, & *Pooley, H.*, 126, Weighing.
 — *S.*, 1834, Regulating steam-engines.
Greey, E. J., 4357, Engines and pumps.
Gregg, W. P., 2874, Roller skates.
Gregory, C. C. (Clark), 3258, Steam-engines.
Gregory, H. S., 571, Seed and manure drills.
 — *J.*, & *Topping, J.*, 621, Cutting clay.
Greig, D., & *Eyth, M.*, 527, Towing machinery.
 — *D.*, & *Eyth, M.*, 1265, Steam ploughs, &c.
 — *D.*, & *Shaw, R. H.*, 1657, Steam cultivators.
 — *D.*, & *Burton, R.*, 1658, Tramway carriages.
 — *D.*, & *Daniel, W.*, 3535, Engines and boilers for [winding, &c].
 — *G.*, 4284, Waggon; distributing manure.
 — *J.*, & *Spinks, C.*, 2549, Grinding grain, &c.
 — *J.*, & *Spinks, C.*, 4147, Grinding grain, &c.
 — *T.*, 1970, Lubricating wool in carding.
Greene, A., & *Thomas-Anquetil, A.* (Clark), 2210, Fire-arms.
Grenfell, H. H., & *Newman, E.*, 3607, Working heavy [guns, rudders, &c].
Grey, G., *Brydon, R.*, & *Davidson, J. S.*, 1489, Boring.
Grice, E. J. (*Kirkpatrick*), 4060, Railway chairs.
Griffin, G. F., 771, Steam-engines.
 — *J. T.* (*Austin*), 219, Wrenches.
 — (*Wood*), 4124, Reaping and mowing.
Griffin, R. A. (Lake), 212, Peat-fuel.
 — (Lake), 2480, Peat-fuel.
Griffin, Thomas, 271, Coupling for driving belts.
 — *Townshend*, 3375, Metallic cases.
Griffiths, G., 602, Sewing-machine shuttles.
 — *J.*, 2548, Filing steel and iron.
 — *J.*, 3233, Moulding artificial fuel and bricks.
Griffiths, L., 1782, Cleaning tin plates.
Grillone, G., 2955, Starting sewing-machines.
Grime, R., 2082, Weaving quilts.
Grimshaw, H., *Briggs, J.*, & *Hudson, R.*, 4471, Fabrics.
Grindrod, J., 3018, Screw-stocks and vices.
Griot, G., & *Polito, L.*, 2736, Waterproofing substances.
Grisar, E., 1312, Controller apparatus for domestic uses.
Griscom, S. E., & *Larcr, D.* (Haseltine), 1129, Millstones.
Griswold, A. D. (Lake), 4313, Feather dusting brushes.
Groshears, J. (Newton), 3797, Sizing warps.
Groubman, C., 1178, Sewing-machines.
 — *C.*, 1251, Indicating progress of trains.
Grout, W. H. J., 1163, Bicycles and wheels.
Grove, W. A. P. la, 3851, Toys.
Grove, W. A. P. la (Clark), 292, Mechanical toy.
Groves, F., 2854, Railway breaks.
 — *F.*, & *Bramall, S.*, 83, Railway breaks.
 — *T. B.*, 476, Cigarettes and cigars.
Grubinski, F., 281, Mowing-machines.
Gruby, J., 312, Umbrellas and parasols.
Grueneweg, C. (Wirth), 3323, Oil-color.
Grundy, D., 3067, Wheels of vehicles.
Grüneberg, H., & *Vorster, J.* (Johnson), 2639, Soda and [potash].
Grut, J. B. C. (Clark), 875, Hook attachments for dress.
Gschwind, J., & *Beberdick, C.* (Clark), 421, Mouldings.
Guelton, A. J. B. & Co., (Gedge), 3724, Plates, slabs [and tiles].
Guerra, S., 1955, Blowing apparatus for organs, &c.
Guest, J., 901, Straw-elevators.
 — *J. H.*, 1225, Fire-alarm telegraphs.
Guillery, H., 1447, Surgical splints.
Guinness, W. S., 3044, Sewing-machines.
Guivet, J. A., 3572, Sewing knitted fabrics.
Gurr, J., & *Williams, D.*, 103, Anchors.
Gutensohn, A., 3650, Disinfecting and medicated paper.
Guthrie, E., 3762, Paving.
Gutteridge, F., & *Siddall, J.*, 243, Oil lamps.
Guy, C. J., *F. S.*, & *J.*, 2806, Stationery cabinets.
 — *F. S.*, *J.*, & *C. J.*, 2806, Stationery cabinets.
 — *J.*, *C. J.*, & *F. S.*, 2806, Stationery cabinets.
Guyer, I. D. (Browne), 2801, Bolt and nut lock.
Guyot, J., & *Ralu, L.*, 3606, Stopping railway trains.

H.

- Haag, J.* (Scott), 2758, Motive-power engines.
Haarmann, W., 709, Artificial vanillin.
Hache, E. H., 2493, Gas pressure indicators.
 — (*Lévy*), 301, Gas pressure indicator.
Hackin, H., 1001, Cooling liquids.
Hackney, W., 3795, Coke.
Haddan, J. C. (*Cordurie & Anthony*), 2708, Treating [sulphides, oxides, &c].
Haddock, W. (Lake), 1382, Nails.
Hadfield, R., 4184, Wheels for carriages.
Haggas, W., 2442, Looms.
Haghe, A., 1367, Working signals.
Hahn, F., 360, Compressed fuel.
Hahn, S., & *Pieper, C.* (Haseltine), 2832, Sewing-machines.
 — *T.* (Wirth), 2680, Watchman's time detectors.
Haigh, A., & *Barrett, J. H.*, 1116, Taps and cocks.
 — *W. B.*, 4210, Wood-cutting machines.
 — *W. B.*, & *Bleasby, A.*, 556, Furnaces or cupolas.
Halbert, W. M., 1150, Color printing of books, &c.
Hald, J. D. F. (*Hoff & Adamsen*), 1351, Blast pipes.
 — (*Frölich*), 1770, Preserving milk and cream.
 — (*Ångström & Wiman*), 3093, Steam-boilers and [tubes].

- Hale, T., 4144, Preserving wooden posts.
 Haley, J., 722, Wire-cards.
 — J., 1927, Pressing glass.
 — S., 616, Splitting hides or skins.
 Halford, T., & Bloomer, F., 1102, Railway signals.
 Halket, D. A., 1131, Indicating speed of revolving axles.
 Hall, D., Taffinder, J., & Wilson, M., 3971, Working saw [frames].
 Hall, H. M., Bishop, G. H., & Bishop, T. B., 1527 [Sewing-machines].
 Hall, James, & Burge, G., 3696, Stone breakers.
 — Jesse, Kirkwood, J. T., & Lascelles, C. T. E., 4408, [Locking, &c. tram car wheels].
 — Jesse, Kirkwood, J. T., & Lascelles, C. T. E., 4410, [Tram-car motors, breaks, &c].
 — John & W., 1879, Sawing machinery.
 — Joseph, 468, Treating spent tan, spent hops, &c.
 — T., 3669, Money-checking.
 — T. F., 3491, Digging land.
 — W. & J., 1879, Sawing machinery.
 — W. M., 1050, Sealing letters.
 — W. S., & McLeish, R., 2258, Watering apparatus.
 Hallam, S., & Lamb, J. W., 3955, Water-gauge fittings.
 Hallsworth, S., & Bailes, R., 2408, Clarifying impure [waters].
 — S., & Bailes, R., 3459, Treating sewage.
 Halmshaw, D., 2830, Extinguishing fires.
 Halpin, D., 4278, Floating docks.
 Halvorson, H. (Shaw), 4310, Lamp wicks.
 Hambleton, F. H. (Prunty), 3699, Admitting continuous [flow of fluids, &c].
 Hamburg-American Sewing Machine Co. (Jensen), 3291, [Folding and pressing trimmings, &c].
 Hamer, Walter, Bond, J., & Threlfall, R. A., 30, Polish- [ing spinning rollers, &c].
 — William, & Giles, A. (Farrar & Whiting), 2881, [Moulds].
 Hamilton, J., 3549, Direct-acting pumps.
 — J. B., 119, Musical instruments.
 — J. B., 1590, Musical instruments.
 — J. B., 1685, Musical instruments.
 — J. B., & Gouverneur, J., 443, Musical instru- [ments].
 — J. B., Wade, G., & Voysey, R. W. O., 4049, [Musical instrument strings].
 — J. B., Wade, G. E., & Voysey, R. W. O., 4149, [Organs].
 Hamlyn, R., & Farrer, H. L., 2888, Tanning hides.
 Hammersley, W. H., & Angus, R. N., 1743, Piston rods, &c.
 Hammond, E. & H., 2553, Cartridge cases.
 — G. F., & Morgan, D., 2130, Packing.
 — H. & E., 2553, Cartridge cases.
 — H. W. (Weigold), 1227, Treating tobacco.
 — J. E., 1708, Photographic albums.
 Hampson, J. (Evans), 3985, "Fishing" railway rails.
 Hanchett, M. W. (Clark), 3002, Pianofortes.
 Hancock, J., 728, Knitted fabrics.
 Hands, D., & Scampton, T., 1830, Scotch caps or bonnets.
 Handscomb, S. H., Moffatt, A. C., & Allerton, J., 4040, [Furnaces].
 Handyside, H., 2323, Railway couplings.
 — H., 2837, Chains or cables.
 — R. B., & Alley, S., 2455, Detecting flaws in [shafts, &c].
 Hannam, G. W., & Smith, A., 562, Preparing peat.
 Hansen, E. (Morgan-Brown), 3148, Preparing china, [&c. for metallic deposits].
 Hanson, J., 3036, Window hangings and fasteners.
 — R., Hicks, J. J., & Crossley, L. J., 4111, Water- [gauges].
 Hanssen, C. J. T., 2749, Producing heat.
 Harcourt, J., 3666, Bottle stoppers.
 Harcourt, O. S. H., 1961, Presses for brick clay, peat, &c.
 Hardcastle, E. P., 2778, Opening tins or canisters.
 Harding, G. P. (Morgan-Brown), 4166, Cannon.
 Harding, T., 2381, Railway breaks.
 — T., 3859, Ventilating sewers, &c.
 Hardy, C. A., & Stayner, A. E., 2877, Attaching handles [to picks].
 — J., 2902, Traversing cranks.
 Harfield, W. H., 310, Capstans and windlasses.
 — W. H., 3026, Windlasses.
 Hargreaves, J., & Robinson, T., 448, Sulphates of soda, &c.
 — J., & Robinson, T., 2018, Sulphates of soda, &c.
 Harkness, W. (Lake), 2169, Gas-making.
 Harland, J. W., 3303, Knobs or handles.
 Harling, G., & Whiteley, W., 244, Looms.
 Harlow, B., 541, Earthenware printers' stoves.
 — B., 2683, Boilers of hot-water apparatus.
 — R., 1842, Hot-water boilers.
 Harmignies, A. (Johnson), 658, Steam-engines.
 Harper, J., 951, Steam and air-engines.
 Harries, G. E., 1174, Brushing-boot for horses.
 Harrington, J., 44, Locks or fastenings.
 — J., 71, Treating skins or hides.
 — J., 853, Attaching knobs to spindles.
 — J., 2025, Fixing knobs on locks or spindles.
 — J., 2026, Gaseliers.
 — J., & Brent, H., 2554, Gaseliers.
 Harris, D. (Lake), 539, Stretching boots and shoes.
 Harris, Edward, 4051, Safety envelopes.
 Harris, E., Oliver, J., & Walton, F. (Harris), 2053, [Distilling].
 Harris, I. B., 3433, India-rubber mats.
 — J., & Judson, J., 304, Sewing-machines.
 — M. M. (Walton, Harris & Oliver), 2053, Distilling.
 — R. J., Lund, J., & Willett, G., 2189, Ash closet.
 — R. J., Lund, J., & Willett, G., 2567, Sewage filters.
 Harrison, F. A. & Priestland, C., 1791, Adjusting cords [of window blinds, &c].
 — G., Goodbehere, T., & Brooks, S., 1502, Spin- [ning and doubling].
 — James, 383, Condensing, refrigerating, &c.
 — James, 1244, Refrigerators and ice safes.
 — James E., 3083, Metal buttons, washers, rings, [&c].
 — John, 1084, Signalling on railways.
 — John, 3218, Sharpening, &c. saw teeth.
 — John, Freeston, T. A., & Ellinor, G., 3665, [Iron and steel].
 — John, Loynd, W., & Clayton, R. H., 537, Air [pumps].
 Harrison, T. W., & Richardson, A. P. (Haseltine), 1109, [Looms].
 Harrold, W., 4027, Gas-stoves.
 Harrop, J. J., 485, Tin and lead piping, &c.
 Hart, E., 1398, Disinfecting and deodorising agents.
 — G. W., 2265, Iron and steel.
 — G. W., & Stevenson, H. R., 4483, Fuel.
 — H. W., 1340, Steering ships.
 — H. W., 3894, Antiseptic paper.
 — H. W., 4345, Carriage fasteners and indicators.
 — S., 2375, Road carriages.
 Hart, W. (Johnson), 358, Lowering and hoisting apparatus.
 Harte, T. W. V., 1309, Storing or conveying eggs.
 Hartley, John, & Rawsthorpe, S., 62, Sizing yarns.
 — John, & Sugden, Z., 871, Warming buildings.
 — Joseph, 1768, Vats and attenuators.
 — Joseph, 3084, Uniting glass to iron, &c.
 — O. H., & Smith, J. H., 188, Self-acting mules.
 — R., 3542, Railway couplings.
 — W. P., 1888, Hard confectionery.
 Hartmann, G. H. J. & W., 229, Locking, &c. carriage doors.
 — W. & G. H. J., 229, Locking, &c. carriage doors.

- Hartnell, W., 4276, Tooling bolts and nuts.
Hartog & Co. (Clark), 1900, Breaking, &c. flax.
 (Soul), 2037, Steam-engines.
 Harvey, C., & Hoskins, E., 1140, Taper and parallel tubes.
 — J., 1605, Carriages.
 — J., & Pryer, G., 581, Ships' sails.
 — J. F., 258, Umbrellas, &c.
 — R. S., 676, Privies and earth closets.
 — R. S., 865, Pan for privies and closets.
 Harvie, A. N., & Lockerbie, T., 2002, Kilns.
 Harwood, E., & Senier, S. A. (*Desterbecq*), 3265, Crimp-
 [ing, &c. fabrics].
 Haseler, G. C., 1904, Fasteners for earrings.
 Haseltine, G. (*Jones & Pauly*), 35, Steam-engines.
 — (*Thurston*), 96, Testing wood, iron, &c.
 — (*Beckwith*), 474, Sewing-machines.
 — (*McGee & Risher*), 807, Steam-engines.
 — (*Hopper*), 815, Dry gas-meters.
 — (*Meaker*), 937, Hoistway doors.
 — (*Brown & Fulton*), 1054, Sheep-shears.
 — (*Harrison & Richardson*), 1109, Looms.
 — (*Larier & Griscom*), 1129, Millstones.
 — (*Smith*), 1219, "Butteraine."
 — (*Read*), 1228, Water-meters.
 — (*Isbell*), 1632, Buttons.
 — (*Higley*), 1936, Railway trucks and axle-boxes.
 — (*Dean, Smith, & Merrell*), 2001, Millstones.
 — (*Thompson*), 2108, Sewing-machines.
 — (*Brayton*), 2209, Gas-engines.
 — (*Walsh*), 2288, Syringing bottles.
 — (*Baker*), 2289, Scoop and sifter.
 — (*Kendrick Loom Harness Co.*) 2291, Weavers'
 [harness].
 — (*Laftin*), 2394, Disintegrating substances.
 — (*Bate*), 2352, Refrigerating apparatus.
 — (*Dunning & George*), 2475, Horse-shoes.
 — (*Rabbeth*), 2497, Spindles & bolsters.
 — (*Roach*), 2640, Faucets.
 — (*Cook*), 2717, Illuminating compass cards, &c.
 — (*Thurston*), 2741, Forging, drilling, &c.
 — (*Allen*), 2810, Railway wheels.
 — (*Chesterman*), 2811, Registering fares.
 — (*Hahn & Pieper*), 2832, Sewing-machines.
 — (*Richards*), 3022, Cutting and gauging butter.
 — (*Bates*), 3186, Elevating coal, &c.
 — (*Woods*), 3428, Supplying water to boilers.
 — (*Bothwell*), 3489, Feeding gas retorts.
 — (*Bryant & Nichols*), 3644, Spools.
 — (*Works & Todd*), 3682, Rotary engines.
 — (*Jones*), 4053, Steam-engines.
 — (*Vogel*), 4054, Cutting files.
 — (*Judson & Cogswell*), 4231, Governors.
 — (*Tarr*), 4233, Casting metals.
 — (*Bate*), 4321, Refrigerating.
 — (*Hodge*), 4464, Steam-engine valves.
 — (*Wardwell*), 4466, Motive-power engines.
 — (*American Enamel Co.*), 4486, Pipes.
 Hasenclever, R. (Wirth), 4291, Chlorine.
 Haswell, C. H. (Clark), 1339, Steam-boilers.
 Hathaway, F. C., 2302, Fastenings for purses, &c.
 — H., 1030, Furnaces; supplying air.
 Hattersley, R. L., & Hebden, T., 1093, Casting metals.
 Haughton, E., 2743, Ships' cots or berths.
 — J., Thompson, T., & Peile, S., 1303, Rakes.
 Hava, J. G. (Lake), 2458, Cod liver oil.
 Havard, E. (Bonneville), 4417, Steam or compressed
 [air carriages].
 Hawken, E., 3402, Economising fuel.
 Hawker, E., 2135, Confectionery.
 — E., 4371, Confectionery.
 Hawkings, W., 2089, Ladders and fire-escapes.
 Hawkins, E., 2898, Cinder sifters and collectors.
 Hawkins, F., & Lawrence, S., 2214, Expansion governors.
 — W., & Darlaston, W., 3292, Furnaces.
 — W. M., & Pasco, T., 2240, Perambulators.
 Hawksworth, S., 1968, Surface coverings, floor cloths, &c.
 — T., & Chaffer, J. (*Eaton*), 3808, Washing
 [clothes].
 Haycraft, G., 4009, "Pebble" gunpowder.
 — G., 4046, Refining saltpetre.
 — G., 4478, Gunpowder casks.
 Hayden, H. W., 1212, Rolling metal tubes.
 — W., 1477, Parallel motion for piston rods.
 Hayes, I. R., & Somerset, J., 2204, Umbrellas; parasols.
 Hayes, J., & Lathrop, L. W. (Clark), 2835, Sewing-
 [machines].
 Hayhurst, W., 2192, Steam-engine governors.
 Hays, W. B. (Imray), 1104, Peat-fuel.
 Hazeldine, F., 565, Valves or taps.
 Hazlehurst, G. S., 1957, Pumping acids and other liquids.
 Head, J., 2031, Thrashing machines.
 Heald, A., 1864, Power looms.
 Heale, H. W., & Gowan, E. D., 2017, Taps or valves.
 Healey, B. D., 1315, Moulding and compressing fuel, &c.
 Heape, E. K., & Wheatley, W., 2986, Heating and cooking.
 Hearson, C. E., 167, Argand burners for gas and oils.
 — C. E., & Constantine, T. J., 3088, Cooking.
 Heath, T. E. & T. E., & Evens, T., 3446, Fuel.
 Heaton, C., 189, Emery and other grinding machines.
 — C., 689, Emery-wheels.
 Heaton, D. (Bousfield), 2194, Buttons.
 Heaton, G. W., 1162, Boring tunnels.
 — J., & Stoker, A. W., 2603, Casting steel.
 Heaven, A., 446, Ornamenting woven fabrics.
 — A., 4336, Embroidering fabrics.
 Hebden, T., & Hattersley, R. L., 1093, Casting metals.
 Hedderwick, P. D., 1752, Blast-furnaces.
 Hedges, K. W., 463, Steam-boilers and engines.
 Hedley, G. H. C., 123, Fire-lighters.
 — R., 4252, Raising and lowering ships' boats.
 Heginbotham, W., 1194, Door fasteners for wagons.
 Heilborn, F. X. F., 3383, Sleeve-links, studs, &c.
 Heiligendorfer, E. (Clark), 3259, Furnaces.
 Hellawell, H., & Norton, T., 381, Weaving velvets, &c.
 Helmer, F. M. E. (Lake), 1656, Transmitting motion.
 Hely, E., 3707, Printing and embossing.
 Hempsted, R., 1639, Cutting, slicing and pulping roots.
 Hemptinne, A. F. de, 2807, Sulphuric acid.
 Henchman, J., 2253, Cop-winding machines.
 Henckel, J., 2177, Automatic carriage couplings.
 Henderson, A. C. (*Picot*), 861, Sheep-shears.
 — (*Aubert*), 1902, File fabrics.
 — (*Gaylord*), 2110, Fire-arms.
 — (*Welle & Tabutiaux*), 2164, Winding weft;
 [shuttles].
 — (*Auroy*), 4105, Looms.
 — A. G., & Ritchie, D., 1801, Refrigerators.
 Henderson, J. (Day), 1267, Iron and steel; furnaces.
 Henderson, J., & Königs, E., 1742, Sulphate of soda,
 [hydrochloric acid and chlorine].
 — J. C. A., 1252, Ladies' dress improvers.
 — T., 2812, Supplying fuel to furnaces.
 — T., Thompson, W. P., & Smith, D., 569,
 [Supplying fuel to furnaces].
 — T. H., 3314, Puddling iron.
 Hendrix, P. J., 1011, Preserving from explosion, lamps, &c.
 Hennuy, E. J., 703, Water-alarm.
 Henry, M. (*De Méritens & Kresser*), 1132, Sugar.
 — (*Nousse*), 1664, Treating straw, &c. for paper.
 — (*Faucheux*), 2483, Treating residua in dis-
 [tilling, &c.].
 — (*Lair*), 2802, Obtaining ammonia.
 — (*Giffard*), 2882, Carriages.
 — (*Cross*), 3470, Pencil-cases, &c.

- Henry, W., 589, Carburetting hydrogen gas.
 Henty, G. A., 2127, Trap for cisterns.
 Hepworth, S. S., & Paulding, G., 1798, Centrifugal machines.
 Herbert, H. J. (Wilbur), 1790, Drawing off liquids.
 Herbillon, W., (Wilson), 3763, Steam-engines.
 Herlert, R., & Browne, J. C., 842, Regulating clocks.
 Herring, R., 1641, Steam-engines for cranes, hoists, &c.
 — R., 4366, Securing gas retort lids.
 Herscher, C. G. & E., & Geneste, P. E. (Johnson), 3047, [Compressing gaseous fluids.
 — E. & C. G., & Geneste, P. E. (Johnson), 3047, [Compressing gaseous fluids.
 Herveux, C., 1151, Tanning.
 Herzen, A., 2032, Preserving uncooked meats.
 Hesse, L. (Lake), 1415, Deodorising and utilising sewage.
 Hewitt, H., & Leonardt, D., 2855, Boxes for pens, &c.
 Hey, J. E., & Hill, J., 3863, Ventilators.
 — J. E., & Hill, J., 4270, Ventilators.
 Heydon, T., & Evans, D., 844, Burr-stone grinding mills.
 Heyl, H. R. (Mills), 1931, Making paper boxes.
 Heymann, M., 1546, Portable book holder.
 Heys, W. E., 4358, Moulding toothed wheels, &c.
 Heywood, E., 984, Self-acting temples for looms.
 — H., & Dickens, T. & A. L., 2658, Dyeing yarns.
 — J. S. C., 216, Compositions for protecting surfaces.
 Heyworth, E., & Smalley, W., 375, Steam-boilers.
 Hickisson, J., 279, Stopping bottles, jars, &c.
 Hicks, J., 544, Saving life at sea.
 — J. J., Crossley, L. J., & Hanson, R., 4111, Water-gauges.
 Higginbottom, J., & Hutchinson, E., 3398, Air supply to millstones.
 Higgins, C. S. & W. B., & Burns, J. (Bonneville), 1271, [Water-closets.
 Higgins, F. H. W., 3414, Fire and burglar alarms.
 — F. H. W., & Davies, W. H., 640, Telegraphs.
 — F. H. W., & Davies, W. H., 2478, Telegraphs.
 — J., & Whitworth, T. S., 1884, Spinning fibres.
 — J. J., 2976, Umbrella runner.
 Higgins, W. B. & C. S., & Burns, J. (Bonneville), 1271, [Water-closets.
 Higginson, A., 42, Governors.
 — A., 2552, Pumping engines.
 Higgs, P., 3237, Coal-cutting machines, &c.
 — P., & Perch, W., 2452, Water-pressure engines, &c.
 — P., & Perch, W., 2546, Pistons.
 Higham, J., 2657, Steam and other engines.
 Highton, H., 439, Electric telegraphs.
 — H., 3006, Submarine telegraphs.
 Higley, A. (Haseltine), 1936, Railway trucks; axle-boxes.
 Hilger, A., & Ladd, W., 3275, Spectroscopes.
 Hill, A. S., 3216, Lowering bodies or weights.
 Hill, C. E. (Johnson), 2398, Columns, piers, &c.
 Hill, D., & Black, W., 173, Soda.
 — E. J., & Clark, J. L., 564, Railway signalling.
 — F. B., 2915, Coupling hose; securing covers on pipes.
 Hill, G. W., & Fassett, E. S. (Lake), 1389, Lubricators.
 Hill, H. C., 341, Winding yarn and thread.
 — H. W., & Warsop, G., 1181, Rock-drill apparatus.
 — John, & Hey, J. E., 3863, Ventilators.
 — John, & Hey, J. E., 4270, Ventilators.
 — Joseph, & Cheshire, J., 2444, Solitaires and studs.
 — T. K., 4181, Safety valves.
 Hiram, W., 2645, Tying cereals into sheaves.
 Hillecot, T., & Montgomery, W., 1083, Furnaces.
 Hills, F. C., 934, Gas and gas liquor.
 Hilton, R. L., 3873, Circular saw benches.
 — W., & Clarke, F. R., 1402, Railway couplings.
 Hime, F., 3177, Aerial navigation.
 Hinde, G. J., 878, Aniline dyes.
 Hindley, G., 526, Cutting and dressing stone.
 Hines, C., 3155, Bottle stoppers; filling and washing [bottles.
 Hinks, James & Joseph, 1114, Oil lamps.
 — Joseph & James, 1114, Oil lamps.
 Hipkins, D., 664, Artificial butter.
 — D., 684, Artificial butter; purifying butter.
 Hird, H., & Saul, J., 744, Saving fuel in steam-boilers.
 — T., & Robinson, N., 2146, Looms.
 Hirsch, H. (Oppenheimer), 3884, Drain and other pipes.
 — J. (Johnson), 594, Applying heated air.
 Hirschhorn, C. (Aub), 3832, Shirt collars, cuffs, &c.
 Hirschmann, J. (Philipp), 3209, Portmanteaus, &c.
 — (Philipp), 3210, Clearing grate bars.
 Hirst, J. G., & Green, J., 3234, Morticing machines.
 Hitchcock, A. (Lake), 3231, Anvil beds.
 — R., Sigourney, J. M., & Rosa, W. V. V. (Johnson), 4283, Lamps; spring movements.
 Hitchen, J., 3427, Hoisting and lowering goods, &c.
 Hivonnait, L. H. (Gedge), 1191, Crushing food.
 Hobday, H. J., & Boyce, J. E., 2471, Umbrellas and [parasols.
 Hock, J., 493, Motor-engines.
 Hodge, G., 3608, Expressing oil; oil-cake.
 Hodge, S. F. (Haseltine), 4464, Steam-engine valves.
 Hodgson, C., 3734, Building floating structures.
 — G., & Broadley, J., 2147, Weaving.
 — N., & Fryer, J. C., 1258, Horse-shoes.
 Hodson, R., 2701, Utilizing sawdust and shavings.
 Hoe, R. M. (Newton), 2463, Damping paper for printing.
 — R. M. (Newton), 3434, Letter-press printing.
 Hoff, L. E., & Adamsen, O. (Hald), 1351, Blast-pipes.
 Hoffman, J. W., 1786, Hand printing apparatus.
 Hoffmann, F. (Wedekind, Chamberlain & Craven), 4138, [Kilns.
 Hogg, A., 1669, Speed regulator or governor.
 — J., 1889, Teaching alphabet and spelling.
 — T. J., 4468, Sanitary ventilators.
 Holden, A., & Whitaker, R., 2671, Measuring tapes.
 — E., 578, Preparing fibres for combing.
 — E., 3123, Preparing and combing fibres.
 — J., 3193, Forcing or pressing by water, air, &c.
 — J. & J. E., 114, Washing wool.
 — J. E. & J., 114, Washing wool.
 — R. W., & Trusswell, W., 2867, Stoves.
 — T., 3993, Cement.
 Holder, P., & Stotz, A. (Bossert), 3024, Shearing sheep.
 Holding, J., 4364, Healds and mails for looms.
 Holland, A., 2114, Shearing and clipping apparatus.
 — A. R., 3421, Shirts.
 — H., 641, Gas.
 — H., 935, Gas.
 — H., & Phillips, G., 4484, Helical springs.
 — P., 3931, Boots and shoes.
 — W., 1036, Umbrellas and parasols.
 — W. T., 2470, Bricks and tiles.
 Hollands, E. R., 3741, Irons heated by gas.
 — W. S., & Ilbery, J. A., 2804, Treating oils, &c.
 Hollings, A. E., & Hollings, E. J., 2137, Seed-drills.
 Hollings, E. J., & Hollings, A. E., 2137, Seed-drills.
 Hollis, C. P., 2156, Propellers to facilitate swimming.
 Holman, A., & Coleman, J. C., 4377, Printing paper.
 — S., 3687, Gas.
 — S., 3768, Steam-engine condensers.
 Holmes, E. J., & Wainmann, L. A., 4391, Steam-engines.
 — F., 68, Polishing stone, &c.
 — F. R., J., & G. T., 2057, Horse-hoes.
 — G. T., F. R., & J., 2057, Horse-hoes.
 Holmes, H. G. (Johnson), 1519, Spark arresters.
 Holmes, J. G. T., & F. R., 2057, Horse-hoes.
 — N. J., 1324, Signal lights.
 — N. J., 1370, Life-saving apparatus.
 — S., 1206, Optical instruments.

- Holness, S., 4140, Indicating devices on lamps, &c.
 Holroyde, J. B. (*Connery & Holroyde*), 2932, Caulking [metallic plates].
Holroyde, W. J., & Connery, J. W. (Holroyde), 2932, [Caulking metallic plates].
 Holstead, D., 2737, Looms.
 Holt, C. H., 3131, Casting steel and other metals.
 — H. P., 1831, Metallic connections for neckties.
 — H. P., & Dawes, W., 1726, Cutting metallic plates.
 — H. P., & Dawes, W., 1728, Steam-engines.
 — H. P., & Dawes, W., 2239, Cutting grass plot edges.
 — H. P., 3226, Heat and steam generators.
 — H. P., 3227, Expansive condensing steam-engines, [&c].
 — H. S., Joseph & James, 3074, Preparing fibres for [spinning].
 — James, H. S., & Joseph, 3074, Preparing fibres for [spinning].
 — Joseph, James, & H. S., 3064, Preparing fibres for [spinning].
 — T., & Earnshaw, E., 3841, Steam-engines.
 Holt, Hon. T., *Garran, A., & Cracknell, E. C.* (Lloyd), [2385, Blasting cartridges].
 Holtermann, F., 1697, Cases for jewellery, &c.
 Holyoake, W. R., 3444, Type; transferring designs, &c.
Homergue, L. C. d' (Rawson), 1448, Heating furnaces.
 Homfray, W. H., Joel, H. F., & Canning, Sir S., 3147, [Pneumatic signalling].
 Hönck, J., 3645, Treating fish for eating.
Honnaj, M. L. (Murdoch), 3583, Carbonizing spent tan; [obtaining oil, &c. tar].
 Hood, R. J. (*Stewart*), 3516, Exhaust apparatus for [engines].
 — W., 1306, Telegraph and signal posts, &c.
 Hook, T., 2544, Sewing-machines.
 Hooker, J., 477, Setting and distributing type.
 — W. D., 203, Steam-engines and pumps.
 — W. D., & Browne, S. G., 3661, Steam-engines; [pumps; valves].
 Hookham, G., 832, Screws.
 — G., 1337, Metallic box fastenings.
 Hopcraft, T., 372, Telegraphing in ships, hotels, &c.
 Hopkins, T., Rees, J., & Thomas, J., 769, Tin and terne [plates].
 Hopkinson, C., & Palmer, W., 572, Dressing flour.
 — J. & J. A., 4405, Steam-boilers.
 — J. & J. A., 4419, Safety valves.
 — J. A. & J., 4405, Steam-boilers.
 — J. A. & J., 4419, Safety-valves.
 — J. T., 694, Sash fastenings.
 Hopper, T. C. (Haseltine), 815, Dry gas-meters.
 Horack, C. L., & Sterne, L., 4242, Railway couplings.
 Horne, R. R., 1425, Refractor or fire-resisting material.
 — R. R., 3641, Fire-resisting material.
 Hornsby, R., & Bounall, J., 2307, Thrashing machines.
 — R., & Scott, J., 3294, Furnaces.
 — R., Phillips, J. E., Innocent, J., & Rutter, G. T., [4174, Reaping and mowing].
 Horrocks, J., 352, Furnaces.
 Horsfall, W., & Greenwood, A., 2266, Horse-shoes.
 — W., & Greenwood, A., 3141, Nuts and bolts.
 Horton, E., 4056, Reaping and binding grain.
 — J., & Outram, E., 2080, Steam-boilers & furnaces.
 Hosking, A. W., 4032, Manifold writers.
 — R., & Blakewell, W., 2760, Rock-drills.
 Hoskins, E., & Harvey, C., 1140, Taper and parallel tubes.
 Hosmer, O. S. (Curtis), 3941, Darning stockings.
 Hotchkiss, B. B. (Morgan-Brown), 2946, Fire-arms.
 Houdart, Masion, Cornex & Co. (Newton), 1349, Furnaces.
 Houghton, J., 2880, Taps or valves.
 — J. M., 2838, Breaks for carts, &c.
 — W., 2116, Cleaning grain.
 Houghton, W., Senior, B., Batley, J., & Kelley, G., 827, [Spinning].
 Houston, R., & Low, J., 3736, Netting machinery.
Howdens, W., & Van Rietachoten, J. J. (Appleby), 1283, [Removing sand banks, deepening rivers, &c].
 How, W. A., 4304, Signalling on railways.
 Howard, James, 991, Flushing & disinfecting water-closets.
 — James H., & Pace, E., 1362, Bundling splints.
 — John, & Bousfield, E. T., 178, Steam cultivators.
 — John, & Bousfield, E. T., 331, Steam-boilers.
 — John, & Bousfield, E. T., 3080, Tilling land.
 Howarth, F., Cook, J. S., & Irving, W., 2477, Looms.
 Howatson, A., 1088, Economising fuel in steam-boilers.
 — A., & Jones, E., 1173, Anti-fouling composition.
 Howden, J., 3246, Screw-propellers.
 Howe, A. S. (Wright), 3311, Electrical burglar alarms.
 Howe, G., 3042, Fixing bed-stones of mills.
Howe, G. W. (Lake), 3037, Printing telegraphs.
Hoves, S., Babcock, A. & N., & Ewell, C. (Lake), 1898, [Purifying and grading middings].
 Howes, W., & Burley, W., 503, Carriage lamps.
 — W. H., 1944, Gas-making; gas-meters.
 Howgate, W., 1148, Finishing fabrics.
Howlett, C. M. (Whiteside), 2682, Clothes-wringer.
 Howlett, F., & Clayton, H. & H., 4455, Steam & air engines.
 Hoyland, S., 3232, Table cutlery.
 Hoyle, A., & Clegg, E. A., 650, Looms.
 — C., Shackleton, W., & Preston, W., 4179, Wash- [ing fibres].
Hubbard & Bradley (Lotz), 2952, Suspending chandeliers.
 Hubmann, G., 825, Ornamenting marble, stone, &c.
 Huch, E. H., 1734, Preserving blood for food.
 Hudson, C., & Garrett, F., 930, Thrashing machines.
 — R., 3896, Carding engines.
 — R., Grimshaw, H., & Briggs, J., 4471, Fabrics.
 Huerne, P., 207, Self-cleaning water filters.
 Huggett, J. A., 3439, Ball valves.
 — J. A., 4161, Horse nails.
 Huggins, J., 3462, Iron and steel tubes.
 Hughs, W. H., 1959, Treating sewage for manure, &c.
 Hughes, A., 921, Binding cut corn into sheaves.
 — E. T. (*Libotte*), 157, Safety cages for mines, &c.
 — (*Whitney*), 628, Fire-arms.
 — (*Daudenart & Verbert*), 911, Baryta and strontia.
 — (*Daudenart & Verbert*), 913, Treating liquors [used in cleaning wool].
 — (*Punderford*), 941, Boots and shoes.
 — (*Daugoise*), 1335, Paper bags.
 — (*Gombert*), 1350, System of locomotion.
 — (*Chillingworth*), 1433, Spade bayonets.
 — (*Baldwin*), 1867, Sewing-machines.
 — (*Mallory*), 2277, Steering propellers.
 — (*Libotte*), 2435, Safety cages for mines.
 — (*Joyce*), 2870, Boots and shoes.
 — (*Wenmackers*), 2933, Constructing submarine [works].
 — (*Barbe & Co.*) 3016, Preventing steam-boiler [explosions].
 — (*Parker*), 4058, Cartridge shells.
 — (*Parmelee*), 4288, Fire extinguisher.
 — G. S. (*Smith*), 750, Railway journal-boxes.
 — Henry, 3787, Steam-engines and boilers.
 — Henry, 3976, Steam-engines.
 — Hesketh, 399, Ornamenting ribbons, &c.
Hughes, J., & Parmly, S. P. (Lake), 1700, Bale ties.
 Hughes, N. H., 734, Measuring liquids.
 — T., 2593, Applying japanned metals.
 — T., 3538, Fire-alarms.
 Hugon, A., 4400, Stereo-graphoscope.
 — G. R. (*Berthet & Laberie*), 2068, Disintegrating.
 Hulett, D., 2894, Gas lamps.
 — D., & Chandler, S., 1287, Gas.

Hulme, E., J., & W., 704, Valves for motive-power engines.
 — J., W., & E., 704, Valves for motive-power engines.
 — R., & Lund, E., 3960, Pumps.
 — W., E., & J., 704, Valves for motive-power engines.
 Humber, W., & Prowett, W., 3207, Ploughing, &c.
 Humbert, C. F., & Joy, D., 1400, Fire-arms.
 Humboldt Machines Manufacturing Co. (Wirth), 3490,
 [Boring rocks.
 Humy, P. R. de F. d', 2929, Call-bell.
 Hungerford, E., 1876, Medical compounds or liniments.
 Hunstone, W. H., & Thorpe, J., 3429, Waterproof fabrics.
 Hunt, B. (*Enterprise Manufacturing Co.*), 606, Mills.
 — (Sibut), 867, Iron horse-shoes.
 — (*National Tube Works Co.*), 1647, Steam injectors.
 — (Baldwin), 1716, Planes.
 — (Reynoso), 2160, Preserving food.
 — (Reynoso), 2181, Ozone and azotic acid.
 — (Reynoso), 2255, Sugar making.
 — (Nilus), 2491, Marine steam-engines.
 — (Le Belleguic), 2643, Railway breaks.
 — (Richards, Crain, & Everitt), 2987, Packing.
 — (Lahaye, Brissonneau & Brissonneau), 3071, Sugar
 [cane mills.
 — (Reynoso), 3377, Purifying air.
 — (Girdwood), 4153, Clarifying cane juice, &c.
 E. (Gledhill), 700, Bottles and stoppers.
 — (Lionarous & Prass), 2693, Sugar.
 — J. (Williams), 1165, Horse hay-forks.
 Hunt, T. S. (Duncan), 546, Precipitating metallic copper.
 Hunt, W., 831, Sulphates of soda and potash.
 — W., 1683, Wrought iron.
 — W., 2016, Sulphates of soda and potash.
 — W., 3005, Sulphates of soda and potash.
 Hunter, A. G., 907, Carburetting air.
 — A. G., 1811, Treating bones, horn-piths, &c.
 — A. G., 1838, Iron and steel.
 — E., Chalk, W. H., & Chubb, G. H., 4393, Iron
 [safes, &c.
 — G., & Jowett, J., 3739, Consuming smoke, &c.
 — J., & Campbell, T. & J. W., 3436, Drilling and
 [planing.
 — R. A., 1222, Supplying water to steam-boilers.
 — T. S., 1741, Excavating machine.
 — T. S., 2097, Constructing docks, quay walls, &c.
 — W., Pinkerton, A., & Smith, W., 908, Weaving.
 Huntington, F. A., Miller, W. J., & Swingle, A., 1141,
 [Fire-arms.
 Huntriss, G., & Swinburn, J., 2790, Tunnelling and
 [cutting coal.
 Hurd, F., & Reade, J., 2747, Travelling caps and pads.
 Husband, R., & Fowler, A. M., 1528, Waterclosets.
 Hussey, C. A. (Clark), 3440, Mucilage brushes.
 — (Clark), 3452, Journal bearings.
 — (Clark), 3678, Axle-boxes.
 Hutcheson, J., 3418, Preparing yarns for thread.
 — J., & Rushton, T. H., 3531, Spinning & doubling.
 Hutchinson, E., & Higginbottom, J., 3398, Air supply to
 [millstones.
 — R. H., 1366, Cotton fabrics.
 — W. N., 756, Obtaining infusions.
 Hutinet, J. J., 997, Hand-boring machine.
 Hutton, T. R., & Pierce, W., Driving sewing-machines.
 Huytens de Terbecq, Count (Vaughan), 1644, Treating
 [phosphates of lime.
 — (Vaughan), 2168, Treating
 [phosphates of lime.
 Hyatt, T., 432, Carriage and footways.
 — T., 478, Asbestos and its application.
 — T., 783, Buildings and walking surfaces.
 — T., 1715, Buildings; building materials and ships.
 — T., 2550, Metal rods, bars, beams, &c.
 — T., 2752, Glass.

Hyatt, T., 3171, Sheets and plates for building, &c.
 Hyde, J. M., 1616, Furnaces for steam-boilers.
 Hydes, T., & Bennett, J. E., 948, Steam-boilers and flues.
 Hynam, J., 615, Cigar lights, matches and wicks.

I.

Ibbotson, A. B., 2613, Self-acting couplings.
 — H., 869, Grinding corn.
 Ilbery, J. A., & Hollands, W. S., 2804, Treating oils, &c.
 Iliff, E., & Rintoul, J., 1795, Pianoforte actions.
 Imbert, A. & L., & Juron, C. & J. (Johnson), 1672,
 [Caustic alkalies and carbonic acid.
 — L. & A., & Juron, C. & J. (Johnson), 1672,
 [Caustic alkalies and carbonic acid.
 Imhof, D., 182, Musical instruments.
 — D., 2622, Musical instruments.
 Imray, J., 981, Working punkahs.
 — (Blair), 308, Regenerative furnaces.
 — (Lemon), 822, Electric telegraphs.
 — (Waters), 862, Laying telegraph cables, &c.
 — (Hays), 1104, Peat-fuel.
 — (Kühne), 2242, Caustic alkalies.
 — (Blair), 2557, Steel.
 — (Borin), 3467, Surgical instruments.
 — (Coyne), 4116, Assorting nails.
 Infreville, G. d., & Armstrong, W. N., (Clark), 954,
 [Electric telegraphy.
 Inghels, A., 4232, Sheltering people from the sun's rays.
 Inglis, W., & Spencer, J. F., 1413, Starting steam-engines.
 — W., & Spencer, J. F., 2529, Steam-engines.
 Ingram, J. G., 2762, India-rubber washers.
 — J. G., 3154, Bands for driving machinery.
 — J. G., 3437, Bands, straps, washers and packing.
 Innocent, J., Rutter, G. T., Hornsby, R., & Phillips, J. E.,
 [4174, Reaping and mowing.
 Inskeep, J. B., 3477, Tiles and quarries.
 Ireland, A. (Johnson), 215, Rollers for spinning, &c.
 Ireland, John, 3900, Shuttles and cops.
 — Jonathan, 2395, Reducing ores.
 — Jonathan, 4215, Distilling carbonaceous materials.
 — W., 2757, Printing textile fabrics.
 Irving, W., Howarth, F., & Cooke, J. S., 2477, Looms.
 Irwin, G. McL. (Lake), 1564, Syrup jugs.
 Isaacs, D. M., 388, Fire-escapes.
 Isbell, R. H. (Haseltine), 1632, Buttons.
 Isger, A. J., Loftin, W., & Koolman, W., 4160, Printing
 [plates.
 Isherwood, T., Broadbent, C. R., & Nuttall, W. (Clark),
 [1539, Looms.
 Ivimy, J. (Long), 1897, Packing for fragile articles.
 — (Long), 2600, Packing bottles.
 Ivory, J. H., 1293, Horse-shoes.

J.

Jack, A., 1840, Fishing rods.
 — W., 4097, Invalid bedsteads.
 Jackson, A. & G., & Smith, J., 707, Looms.
 Jackson, B. (Clark), 1760, Suspending crockery in kilns.
 Jackson, F., 1310, Steam-boilers.
 — G. & A., & Smith, J., 707, Looms.
 — H., & Milburn, R., 1006, Steam generators &c.
 — J., 1591, Lubricant used in preparing wool.
 — J., 2885, Bobbins for spinning.
 — T., 1583, Sulphuric acid.
 — Wilkinson, O'Hara, T., & Lees, T. H. K., 2399,
 [Preparing fibres.

Jackson, William, 2081, Sewing-machines.
 — William, & Fearn, F. H., 2481, Gas-stoves.
 — William, & Prichard, D., 4165, Propelling, and
 [break for vehicles.
 — William, Warner, H. G. & H., 2076, Box-irons.
Jacob, G. (Gedge), 3407, Motive-power "multiplicator."
Jacobs, H., & Munt, J., 1504, Fire-lighters and fuel.
Jacobsen, E. & R. (Jensen), 4473, Pencils.
 — *R. & E. (Jensen)*, 4473, Pencils.
Jacobsohn, N., 3952, Domestic stoves.
 — *N.*, 3953, Envelopes for letters.
 — *N.*, 3975, Moistening envelopes, &c., lubri-
 [cators.
 — *N.*, 3981, Registering votes, fares, &c.
Jacobsohn, S. (Johnson), 349, Polishing floors, &c.
Jacobson, G. J., 2030, Soft white soap.
Jacques-André, B. P. (Newton), 2570, Steam-engines.
Jachne, E. (Abel), 1610, Buildings.
James, A., 2429, Grinding needles.
 — (*Trabue*), 1294, Needles.
 — *E. B. A., Digby, E. T., Gandy, C., Foyl, W., &*
 [*Livesey, J. J.*, 2799, Extract of meat.
 — *G. F.*, 4261, Circular braiding machines.
 — *H., & Stanley, J. M.*, 1452, Milking cows.
 — *Jabez*, 894, Metallic boxes, cans, &c.
 — *Jabez*, 2072, Making cylindrical boxes.
 — *Joseph*, 2167, Color-printing.
Jardine, J., 902, Carriages of lace machines.
Jasper, G. A. (Lake), 3215, Promoting combustion of
 [fuel.
Jefferys, J. C. W., 2269, Glove fasteners.
 — *J. C. W.*, 2596, Jewellery and dress fastenings.
 — *J. C. W.*, 8770, Studs, solitaires, &c.
Jeffries, G., 3442, Sporting fire-arms.
Jelf, L. W., 1378, Raft propeller.
Jenkin, F., 2441, Motive-power.
Jenkins, C. C., & Lee, C. B. (Johnson), 3176, Marine
 [governors.
Jenkins, D., Gardner, S., & Gething, W., 779, Metal plates.
 — *D., Gilbertson, A., & Gething, E. & W.*, 3312,
 [Terne plates.
Jenkins, E. T. (Newton), 3596, Marine governors.
Jenkins, H. M., & Baylis, H. (Clark), 4426, Needles.
 — *H. M. (Oppenheimer)*, 4430, Surgical needle.
Jenkins, N., 4303, Spring-motors.
Jensen, P. (Duval), 13, Fire-arms.
 — (*Erichsen & Edwards*), 188, Vats, &c.
 — (*Gibson & Sons*), 273, Wood-working.
 — (*Köhl*), 797, Tramway locomotives.
 — (*Erichsen*), 1052, Gas.
 — (*Skidmore*), 1062, Buffers and couplings.
 — (*Erichsen & Maardt*), 1072, Producing and
 [utilising gas and heat.
 — (*Ayer*), 1680, Furnaces.
 — (*Asplund*), 2522, Locomotive engines.
 — (*Meidell*), 2523, Fireproof material.
 — (*Mault*), 2543, Peat-fuel.
 — (*La Cour*), 2999, Transmitting, &c. telegraphic
 [messages.
 — (*Hamburg-American Sewing Machine Co.*), 3291,
 [Folding and pressing trimmings, &c.
 — (*Wiman*), 3533, Electric bells.
 — (*Asplund*), 4048, Locomotive engines.
 — (*Simonds & Ferson*), 4332, Tempering steel articles.
 — (*Jacobsen & Jacobsen*), 4473, Pencils.
Jenty, C. (Clark), 2270, Gas and fuel.
Jeraunec, A. (Vaughan), 3220, Hand mirrors.
Jerome, E., Wheeler, S., & Mesick, P., 1701, Boxes.
Jerson, F. H., 1908, Indicating revolutions of shafts, &c.
Jewett, M., 3805, Carriages.
Jewitt, H. (Rose), 1866, Toys.
Jeyes, J., 1812, Waterproof paper or fabrics.

Joannon, F. A. (Johnson), 4282, Hats.
Job, A. M., 2433, Waterproofing, &c. felted fabrics.
Jobbins, W. F., & Warth, A. (Lake), 3582, Cutting
 [textile materials.
Joel, H. F., Canning, Sir S., & Homfray, W. H., 3147,
 [Pneumatic signalling.
John, J. H. St., 2004, Recording fares of public vehicles.
Johnson, E., 2020, Ventilators for sewers and drains.
 — *G., & Shaw, J.*, 847, Motive-power; economis-
 [ing fuel.
 — *Job*, 674, Ball casters.
 — *John, & Andrew, E.*, 2978, Metallic packing.
 — *John C.*, 76, Twist lace machines.
 — *John H. (Nes)*, 10, Steel.
 — (*Cambon & Co.*), 18, Preserving fabrics, wood, &c.
 — (*Mousseron*), 73, Warming carriages.
 — (*Lamarre*), 214, Compositions for signalling.
 — (*Ireland*), 215, Rollers for spinning, &c.
 — (*Pollok*), 247, Shoe tips.
 — (*Jacobsohn*), 349, Polishing floors, &c.
 — (*Hart*), 358, Lowering and hoisting apparatus.
 — (*Planton*), 420, Carding, &c. fibres.
 — (*Lissagaray*), 455, Preserving eggs.
 — (*Walker & Co.*), 475, Heckling fibres.
 — (*Hirsch*), 594, Applying heated air.
 — (*Kolbe*), 595, Acids.
 — (*Harmignies*), 658, Steam-engines.
 — (*Marrel, Brothers*), 663, Armour plates.
 — (*Teyssonneau*), 760, Tins for food, &c.
 — (*Miles*), 761, Preserving eggs.
 — (*Mimault*), 870, Printing telegraphs.
 — (*Lissagaray*), 885, Manures.
 — (*Winans*), 893, Organ stops.
 — (*Sommer*), 1089, Steam-boiler scrapers.
 — (*Pernot*), 1317, Steel.
 — (*Denio & Lobdell*), 1409, Boilers and furnaces.
 — (*Bourgeois*), 1420, Paper hangings.
 — (*De Mersanne*), 1446, Electric-light.
 — (*Holmes*), 1519, Spark arresters.
 — (*Villeminot*), 1542, Looms.
 — (*Redier & Co.*), 1587, Indicating pressure, &c.
 — (*Juron & Imbert*), 1672, Alkalies & carbonic acid.
 — (*Baxter*), 1677, Forges and blowers.
 — (*Waring*), 1718, Drilling rock.
 — (*Manoury*), 1736, Sugar.
 — (*Correy*), 1740, Steam-engines.
 — (*Stephens & Stephens*), 1758, Toy pistols.
 — (*Burlock*), 1813, Eveners for wool-cards.
 — (*Eastwick*), 1846, Artificial yeast powder.
 — (*Peckham*), 1858, Iron and steel.
 — (*Bertrand*), 1869, Umbrellas and parasols.
 — (*De Loynes*), 1916, Filtering liquids.
 — (*Everitt & North*), 1990, Bedsteads.
 — (*Pernot*), 1997, Puddling furnaces.
 — (*Breithaupt*), 2083, Preserving hops.
 — (*Le Luyet*), 2084, Bearing springs.
 — (*Thorp*), 2100, Cooking, lighting, &c.
 — (*Buttrick & Co.*), 2122, Dress patterns.
 — (*Robcis & Sons*), 2178, Printing type.
 — (*Lobdell*), 2384, Steam-boilers.
 — (*Hill*), 2398, Columns, piers, &c.
 — (*Disston*), 2412, Saws and handles.
 — (*Sellers*), 2459, Cutting screws.
 — (*Couvreux*), 2472, Dredging apparatus.
 — (*Brown, Niblock, Zimmerman & Alexander*),
 [2501, Cutting coal, &c.
 — (*Gobiet*), 2512, Coke ovens.
 — (*Silliman*), 2520, Separating ammonia.
 — (*Burlock*), 2584, Weaving tape.
 — (*Grüneberg & Vorster*), 2639, Soda & potash.
 — (*Gray*), 2646, Transmitting musical tones.
 — (*Marot*), 2713, Treating saccharine solutions.

Johnson (Wolcott & Wood), 2795, Motive-power.
 — (Chamberlain), 2873, Folding fabrics.
 — (Geneste, Herscher & Hesch), 3047, Compress-
 [ing gaseous fluids.
 — (Mimault), 3056, Printing telegraphs and codes
 [of signals.
 — (Breval), 3096, Scraping hides or skins.
 — (Jenkins & Lee), 3176, Marine governors.
 — (De Méritens), 3431, Tanning.
 — (La Société Anonyme de la Papeterie de Thode),
 [3708, Paper pulp.
 — (Forquenot), 3779, Slide-valves.
 — (Faivre), 3802, Motive-power.
 — (Vabe & Cuau), 3807, Raising liquids.
 — (Gauthey), 3822, Cartridges, &c.
 — (Goulas & Co.), 3893, Tubular wooden articles.
 — (Baudry), 3984, Indicating fire, &c.
 — (Peyer), 4123, Artificial palates.
 — (Lockwood & Lockwood), 4200, Carburettors.
 — (Salomons), 4216, Ornamenting fabrics.
 — (Joannon), 4282, Hats.
 — (Hitchcock, Sigourney & Rosa), 4283 Lamps;
 [spring movements.
 — (Reaney), 4318, Steam-engines.
 — (Moreau), 4387, Hydrogen gas.
 — (Sellers & Sellers), 4476, Rotary puddlers.
 — (Lamarque & Bories), 4492, Curbing horses.
 Johnson, J. R., & Shanks, P. M., 1517, Printing blocks.
 Johnson, R., 1360, Exhausting air, gas and liquids.
 — R., 3545, Exhausting and propelling fluids, &c.
 — S. H., 19, Sulphur.
 — S. H., 687, Furnaces and retorts.
 — S. H., 2824, Cocks or valves.
 — S. H., 3769, Stone breakers.
 — T., 3443, Ships' berths.
 — W., 2094, Cast-steel edged tools.
 — W., 4407, Hansom cabs.
 — W. C., 4253, Grappels for raising cables.
 Johnston, T. S., 3432, Letter-press printing.
 — W., 531, Compressing air or gases.
 — W., 1332, Compressing air or gases.
 Jolley, W., Birchall, J. T., & Turton, S., 3778, Valves.
 Jolly, F., 2440, Economising fuel.
 Joly, A. (Bonneville), 518, Fire alarms.
 — R. (Brewer), 433, Incinerating substances from wool.
 Jonas, L. (Szalay), 3623, Fire-arms.
 Jones, D., 1115, Consuming smoke.
 — D., 1429, Lubricating valves and cylinders.
 — Edward, 194, Cartridge cases.
 — Edward, 3040, Fog signals.
 — Edward, 3125, Fog signals.
 — Edward, 3129, Metallic cartridge cases.
 — Edward, & Thomson, G. F., 3857, Water tuyeres.
 — Edward, F., 668, Lamps.
 — Elias, & Howatson, A., 1173, Anti-fouling com-
 [position.
 — Ephraim, A. & J. A., 4122, Puddling furnaces.
 — Felix, 3657, Door locks for carriages, &c.
 — Francis L., & Longworth, T., 3389, Looms.
 — Francis L., & Longworth, T., 4135, Looms.
 — Francis St., J., 2797, Taps and valves.
 — G. H., & White, R. G., 3157, Economising fuel,
 [&c. in producing steam.
 — G. H., & White, R. G., 3511, Lighting and ex-
 [tinguishing lamps.
 — H. L., 2466, Disinfecting waterclosets, &c.
 — H. L., 3279, Flushing, deodorizing & disinfecting.
 — James W., & Wallach, H., 3166, Turkey-red fabrics.
 — John Allcock & E. A., 4122, Puddling furnaces.
 — John Allin, 645, Window sashes.
 — John T., 2889, Sewing-machines.
 — John W., 2851, Boot and shoe fastenings.

Jones, John W., 3316, Transferring tram-cars.
 — John W., 4007, Boots and shoes.
 — P., Davies, D., & Edwards, D., 1417, Terne plates.
 — R. J., 2669, Seasoning, marking, &c. wood.
 — R. L., 918, Governors.
 — R. L., 1761, Railway points or switches.
 Jones, T. L. (Haseltine), 4053, Steam-engines.
 — T. L., & Pauly, A. (Haseltine), 35, Steam-engines.
 Jones, T. O., 1582, Crystal handles for umbrellas, &c.
 — William, 4038, Graining and ornamenting.
 — William, & Box, H. N., 4219, Boot and shoe heels.
 — William, & Lewis, J., 2309, Compressing fuel, &c.
 — Wright, 2186, Registering apparatus for cabs.
 Jordan, James, 4328, Safety valves.
 — John, 1494, Cutting and dressing stone, &c.
 — T. B., 1767, Percussive engines.
 Jouret, A. J. (Clark), 1110, Stopping horses.
 Jowett, J., 2487, Craping hair.
 — J., & Hunter, G., 3739, Consuming smoke, &c.
 Joy, D., 366, Hydraulic motive-power engines.
 — D., & Humbert, C. F., 1400, Fire-arms.
 Joyce, C. F. W., 3543, Stays and corsets.
 Joyce, J. L. (Hughes), 2870, Boots and shoes.
 Joyce, T. L. (Selten), 1522, Ice-making; motive-power.
 Jubb, C., & Dransfield, J., 3391, Feeding fibres.
 Jucqueau, L. (Clark), 4120, Railways.
 Judge, J., & Bowness, W. D., 2632, Gas.
 Judson, J., & Cogswell, W. A. (Haseltine), 4231, Governors.
 Judson, J., & Harris, J., 304, Sewing-machines.
 Juron, C. & J., & Imbert, A. & L. (Johnson), 1672,
 [Caustic alkalies and carbonic acid.
 — J. & C., & Imbert, A. & L. (Johnson), 1672,
 [Caustic alkalies and carbonic acid.

K.

Kaemp, K. H., & Nagel, A. C. (Paget), 3719, Centrifugal
 [pumps.
 Kaposi, B. (Klosak), 3160, Preparing machine oils.
 — (Klosak), 3341, Lubricators.
 Kastner, G. E. F. (Clark), 3879, Musical instruments.
 — (Clark), 4162, Musical instruments.
 Kauffmann, E. (Kleemann), 2008, Lamp burners.
 Kaulbach, E., 1629, Raising and lowering chandeliers, &c.
 — E., 2417, Rotatory engines.
 Kay, A. B. & R. A., (Alexander), 1463, Shot cartridges.
 Kay, J., & Knowles, S., 3636, Drying yarns, &c.
 Kay, R. A. & A. B. (Alexander), 1463, Shot cartridges.
 Kay, R. H., & Richardson, A. T., 387, Silk crape.
 Kaye, G. R., 368, Cutting or reducing meat.
 — Jane & Joseph, 1005, Checking receipt of money.
 — Joseph, 4118, Collecting fares, checks, &c.
 — Joseph & Jane, 1005, Checking receipt of money.
 Kayser, C. W. (Schultz), 488, Steam and other engines.
 Kearsley, G., 1208, Reaping and mowing machines.
 Keats, A. & J., & Greenwood, A., 620, Sewing boots, &c.
 — J., 3179, Buttons or studs and button-holes.
 — J. & A., & Greenwood, A., 620, Sewing boots, &c.
 Keddy, T., 1263, Steering and propelling ships.
 Keighley, J., 695, Pickers for looms.
 — J., 2891, Looms.
 Keith, J., 1066, Gas.
 Kell, S., 2219, Seed-drills.
 Kelley, G., Houghton, W., Senior, B., & Batley, J., 827,
 [Spinning.
 Kellogg, C. H., Lewis, G. S., & Bates, F. G. (Clark),
 [3713, Paper bags.
 — J. F. (Massie), 3079, Sewing-machine attachment.
 — (Massie), 3081, Sewing-machine attachment.
 — W. P. (Rollins), 4136, Portable forges.

Kellow, J., 3370, Signalling on railways.
 Kelly, J., 2421, Railway points and signals.
 Kelly, W. E. (Newton), 903, Steam generators.
 Kemp, F., 608, Railway couplings.
 Kempe, A. B., 3901, Reversing, &c. motion; dividing angles.
 Kendall, J. L. (Lake), 701, Floor coverings.
 Kendall, T., 3276, Vaults and graves.
 Kendrick, T., 746, Fasteners for studs, links, &c.
 ——— T., 1262, Carriage steps.
 ——— T., 1665, Ornamenting coffin furniture.
 ——— T., 2355, Solitaires, sleeve-links, &c.
 Kendrick Loom Harness Co. (Haseltine), 2291, Weavers' harness.
 Keniston, C. (Morgan-Brown), 5, Boot & shoe fastenings.
 Kennard, H. J., 1707, Sand pumps or dredgers.
 ——— H. J., 1815, Sand pumps.
 Kennedy, De L., 860, Gripping-tools, punches, &c.
 ——— J. P., Prior, A., & Gibson, J. W., 1516, Tobacco and oil.
 ——— T. S., 4016, Preparing fibres.
 ——— W., 65, Supplying brushes with powder.
 ——— W., 2213, Colored and uncolored yarns.
 ——— W., 3578, Bricks, &c.
 Kennett, J., 1949, Beds.
 Kent, G., & Adam, J., 638, Cutting fruit and vegetables.
 ——— W. H., 3756, Cleaning knives, &c.
 Kenyon, J. & J. H., 3001, Carding fibres.
 ——— J. H. & J., 3001, Carding fibres.
 Kermod, T. C., 1020, Torch for signalling.
 Kerr, J. D., 989, Loading vessels.
 Kerr, J. L. (Lake), 4217, Bores of gun barrels.
 Kerr, R., 3300, Making up for sale, thread, cotton, &c.
 Kessel, G., & Seydeler, G., 149, Distance indicators.
 Key, Jesse, 2685, Boats.
 ——— John, 2350, Hot-neck grease for lubricating.
 Kidd, J., 3174, Gas producing furnaces.
 ——— J., & Barff, A., 971, Treating peat.
 ——— J. H., 1764, Deodorising sewage.
 ——— J. H., 3199, Treating sewage.
 Kidd, J. S. (Clark), 1160, Culinary apparatus.
 Kiddill, J., 536, Poultry fountains.
 Kight, J., & Mohrstadt, G. W., 1710, Sewing-machines.
 Kilburn, R., & Gooder, L., 3980, Milling machines.
 Kilner, T., 3128, Glass furnaces.
 Kilpatrick, J., 1015, Gasaliers and reflectors.
 Kimberley, N. G., & Thompson, W. H., 4201, Steering indicators.
 Kinder, E. C. & J. T., 259, Smoking and fumigating.
 ——— J. T., & E. C., 259, Smoking and fumigating.
 King, A., 4333, Bottle-stoppers.
 ——— E., 763, Couplings for railway carriages, &c.
 ——— F. J., 296, Treating and separating ores.
 ——— F. J., 3551, Separating metals from ores.
 Kingsford, C., 2142, Artificial fuel.
 ——— C., 3728, Compressing fuel, &c.
 Kingsley, E. F. (Gally), 964, Telegraphs.
 Kimppe, W. R., 3573, Caissons and bridges.
 Kinney, I. (Marsh), 1865, Clamping tools.
 ——— I., & Smart, T. W. (Lake), 1395, Cutting scrolls, &c.
 Kippax, J., 2264, Quilts or bed coverings.
 Kirby, E. A., 1051, Lozenges or troches.
 ——— J. & M. E., 2607, Governors.
 ——— M. E. & J., 2607, Governors.
 Kirk, A. C., & Beilby, G. T., 4329, Producing cold.
 ——— W., 187, Shuttle tips.
 Kirkland, J., & Anderson, J., 1977, Sawing timber.
 Kirkman, J., 1896, Packing stuffing-boxes, &c.
 Kirkpatrick, R. S. (Grice), 4060, Railway chairs.
 Kirkwood, J. T., 4463, Iron and steel.
 ——— J. T., & Smith, W. H., 609, Carbonising metals.

Kirkwood, J. T., & Smith, W. H., 610, Treating metals.
 ——— J. T., Lascelles, C. T. E., & Hall, J., 4408, [Locking, &c. tram-car wheels.
 ——— J. T., Lascelles, C. T. E., & Hall, J., 4410, [Tram-car motors, breaks, &c.
 Kirtley, J. G., 765, Economising fuel.
 ——— J. G., 3525, Filters.
 Kirton, W., 4299, Treating cotton-waste.
 Kitchin, J., 604, Steam-boilers.
 Kitson, A., & Naylor, J., 891, Fire-escapes.
 ——— A., & Naylor, J., 4178, Raising and lowering.
 ——— J. H., & Batchelor, J. S., 4411, Locomotives.
 Kleemann, C. A. (Kauffmann), 2008, Lamp burners.
 Klein, A. R. (Coulton), 4224, Governors.
 ——— F. & Co. (Mills), 665, Felt hats.
 Kleinau, C. J. H. (Fourer), 782, Copying presses.
 Kleinpell, K., & Dramburg, L. (Wirth), 2206, Bearings.
 ——— K., & Dramburg, L. (Wirth), 2614, Motive-power.
 Klett, F., Stöffler, A., & Schmitz, A. (Arnheim), 597, [Presses.
 Klingelhoefer & Co. (Cole), 2619, Fire-alarm.
 Klosak, M. (Kaposi), 3160, Preparing machine oils.
 ——— (Kaposi), 3341, Lubricators.
 Klunsinger, P. (Abel), 3293, Railway breaks.
 Knab, D. C., 53, Preventing incrustation in boilers.
 ——— D. C., 4421, Black for painting, printing, &c.
 Knapp, H. F. (Browne), 66, Raising sunken vessels.
 Kneebone, S. & Gay, R., 2965, Retaining pawl for pulleys.
 Knibbs, F. E., 4003, Whip sockets.
 Knight, N. (Camp), 858, Drawing and writing tables.
 Knightley, T. E., 1449, Fire-proof store houses.
 Knott, G. B., 3249, Tube cleaning and stopping boilers.
 Knowelden, J., 2901, Fluid engines.
 Knowles, E., & Fenton, W., 2296, Doffer condensers.
 ——— Sir F. C., 1526, Preventing decay of wood, &c.
 ——— Sir F. C., 1547, Peat-fuel.
 ——— Sir F. C., 1550, Gas.
 ——— G., 1828, Carding engines.
 ——— G., 3912, Carding engines.
 ——— J., 574, Preparing cotton and other fibres.
 ——— J., Shaw, H., & Ditchfield, W., 1462, Weaving.
 ——— L. J., 3519, Looms.
 ——— S. & Kay, J., 3636, Drying yarns, &c.
 ——— W., 1581, "Shake willey."
 Koch, R. & Mueller, H. (Barthel), 3979, Lathes for turning.
 Köhl, A. (Jensen), 797, Tramway locomotives.
 Kolbe, H. (Johnson), 595, Acids.
 Königs, E., & Henderson, J., 1742, Sulphate of soda, [hydrochloric acid and chlorine.
 Koolman, W., Isger, A. J., & Loftin, W., 4160, Printing.
 Köppner, H., & Wannick, F. (Paget), 4354, Steam-engines.
 Körting, E., 3469, Revivifying gas purifying agents.
 ——— E., 3471, Compressing and rarefying fluids, &c.
 ——— E., 3504, Elevating or impelling materials.
 ——— E., 3505, Ventilating, drying, cooling, &c.
 ——— E., 3506, Ventilating carriages, &c.
 ——— E., 3507, Furnaces and fire-places.
 Kresser, V., & de Méritens, A. (Henry), 1132, Sugar.
 Krom, S. R., 1058, Crushing and separating ores.
 Kropatschek, A., Count von, 4337, Fire-arms.
 Krueger, E. C. H., 3765, Cutting wood.
 Kühne, H. (Imray), 2242, Caustic alkalies.
 Kunstädter, J. J., 2318, Motive-power.
 Künzel, C. (Vaughan), 1628, Metallic bearings.
 Kyle, J., 3241, Ice-making.
 Kyte, C. (Wilson), 339, Metallurgical furnaces.

L.

La Bastie, F. B. A. R. de, 2783, Tempering glass.
 Labérie, P., & Berthet, A. (Hugon), 2068, Disintegrating.
 Labette, W. J., 2521, Preventing trains leaving metals.
 Labrousse, J. P., 3819, Paper-pulp.
 Lacaze, A. (Capon), 287, Looms.
 Lace, A., & Stacey, J. T., 1958, Carburising air.
 Lack, P. J., 2049, Gas-burner regulator and fittings.
 — P. J., 3611, Gas-valves and burners.
 Lacordaire, A. (Fourlinnie), 4168, Condensing steam.
 La Cour, P. (Jensen), 2999, Transmitting, &c, tele-
 [graphic messages].
 Ladd, W., & Hilger, 3275, Spectroscopes.
 Lafaurie, H. F., & Potel, H. F. E. (Wise), 2650, Lamps.
 Lafferty, H. W. & R., 754, Corrugating cylinders.
 — H. W. & R., 755, Centrifugal draining machines.
 — R. & H. W., 754, Corrugating cylinders.
 — R. & H. W., 755, Centrifugal draining machines.
 Laflin, A. H. (Haseltine), 2294, Disintegrating substances.
 La Grove, W. A. P., 3851, Toys.
 La Grove, W. A. P. (Clark), 292, Mechanical toy.
 Lahaye, B., & Brissonneau, M. & J. (Hunt), 3071, Sugar
 [cane mills].
 Laidler, W. H., & Wright, J. T., 2376, Hackling, &c, fibres.
 Laing, J., 3493, Sewing-machines.
 Lair, J. A. F. (Henry), 2802, Obtaining ammonia.
 Laird, J., 1411, Making up bags for shipment.
 — J., & Rutherford, W., 671, Weaving bags, &c.
 — J., & Rutherford, W., 1304, Weaving bags, &c.
 Lake, J., 174, Regulating draught in steam generators.
 — J., 4432, Joining leather straps or bands.
 — W. R. (Allen), 80, Adjustable pulleys.
 — (Griffin), 212, Peat-fuel.
 — (Myers), 233, Ventilating and warming.
 — (Leighton), 261, Lamps.
 — (Shepard & Seaman), 278, Pails, cans, &c.
 — (Maldant), 342, Wet gas-meters.
 — (Cattanach), 423, Gum, &c.
 — (Poole), 473, Life-buoys.
 — (Harris), 539, Stretching boots and shoes.
 — (Wilson), 570, Paddle-wheels.
 — (Perry), 585, Hay-tedding machines.
 — (Floyd), 679, Gas-retort joints.
 — (Kendall), 701, Floor coverings.
 — (Sladdin), 719, Loom harness.
 — (Webb), 730, Cartridges.
 — (Bush), 799, Packing chloride of lime.
 — (Beardsley), 857, Protecting the eyes and lungs.
 — (O'Toole), 915, Propelling boats and carriages.
 — (Wiard), 938, Ordnance and projectiles.
 — (Bustin), 962, Fire-escapes.
 — (Godfrey), 968, Screw-propeller shafts.
 — (Black), 978, Device for carrying cartridges.
 — (Gear), 999, Dressing stone.
 — (Wortendyke), 1068, Cutting paper; paper twine.
 — (Donnelly), 1128, Ploughs.
 — (Nobles), 1201, Steam-engines.
 — (Mundell & Partridge), 1233, Boots, shoes, belts, &c.
 — (Swan & Connell), 1243, Water-meters.
 — (Day), 1261, Electric-light apparatus.
 — (Thorp), 1264, Coal oil stoves.
 — (Baxter), 1286, Double-acting pumps.
 — (Renshaw), 1300, Steam-boilers and furnaces.
 — (Loomis), 1381, Regulating speed of steam-engines.
 — (Haddock), 1382, Nails.
 — (Fassett & Hill), 1389, Lubricators.
 — (Kinney & Smart), 1395, Cutting scrolls, &c.
 — (Ludlow), 1399, Treating rectal diseases.
 — (Cushing), 1403, Fire-places, &c.

Lake, (Hesse), 1415, Deodorizing and utilizing sewage.
 — (Brown), 1421, Rotating shaft indicators.
 — (Bass), 1481, Burnishing photographs.
 — (Gardner), 1512, Inhaling apparatus.
 — (Fewkes), 1555, Anchors.
 — (Van Geasen), 1556, Label for cloth.
 — (Irwin), 1564, Syrup jugs.
 — (Helmer), 1656, Transmitting motion.
 — (Foreign Cancellling Punch Co.), 1667, Ticket
 [punches].
 — (Parmly & Hughes), 1700, Bale-ties.
 — (Cottingham), 1730, Ironing machines.
 — (Pregel), 1731, Steam-hammers.
 — (Mersereau), 1788, Dog collars.
 — (Howes, Babcock & Ewell), 1898, Puri-
 [fying and grading middlings].
 — (Vianisi), 1932, Electric telegraphs.
 — (Corliss), 1993, Clothes wringers.
 — (Meylert), 2006, White lead and lime.
 — (Coleman), 2065, Protecting buildings from fire;
 [supplying steam].
 — (Tay), 2075, Spikes.
 — (Arnold), 2138, Fishing nets.
 — (Lebèvre), 2149, Cataplasm or compress.
 — (Harkness), 2169, Gas-making.
 — (Bell), 2250, Fabrics; wood substitute, &c.
 — (Essex), 2259, Hot-blast apparatus.
 — (Tibbits & Weaver), 2368, Rolling metals.
 — (Meyer), 2402, Safety-match igniters.
 — (Muchin), 2418, Clocks and watches.
 — (Firman), 2419, Rendering fatty substances.
 — (Hava), 2458, Cod-liver oil.
 — (Griffin), 2480, Peat-fuel.
 — (Bustin), 2681, Hanging wall paper.
 — (Cliff & Vose), 2712, Elliptic springs.
 — (Thompson), 2719, Umbrellas.
 — (Tryon), 2755, Swimming apparatus.
 — (Muchin), 2761, Governors.
 — (Armstrong), 2860, Chucks for lathes, &c.
 — (Nobles), 2936, Cars or carriages.
 — (Côté), 2974, Heel counters or stiffeners.
 — (Howe), 3037, Printing telegraphs.
 — (Osborne), 3045, Rounding leather.
 — (Meatyard), 3046, Railway carriage wheels.
 — (Browne), 3058, Hydrogen gas apparatus, &c.
 — (Cochrane), 3098, Weaving pile fabrics.
 — (Upsom), 3198, Tilting coal wagons; screening
 [coal].
 — (Jasper), 3215, Promoting combustion of fuel.
 — (Hitchcock), 3231, Anvil beds.
 — (Martin), 3248, Dressing flour.
 — (Lambrecht & Wipperf), 3351, Galvano-hydro-
 [static apparatus].
 — (Watson), 3518, Water level indicators.
 — (Jobbins & Warth), 3582, Cutting textile materials.
 — (Foster & Culver), 3662, Nailing boxes.
 — (Paillard), 3697, Musical boxes.
 — (Cooke & Foss), 3712, Regulating draft in loco-
 [motives].
 — (Côté), 3726, Boots and shoes.
 — (Muchin), 3729, Governors.
 — (Bate), 3790, Refrigerators.
 — (Volke), 3806, Grinding and polishing surfaces.
 — (Lighthall), 3853, Distilled water.
 — (Ballou & Copeland), 3886, Boots and shoes.
 — (Evans), 3918, Ratchet-brace.
 — (Charruy), 4013, Matches.
 — (Young), 4025, Securing buttons.
 — (Shaw), 4077, Repairing spinning rings.
 — (Ballou & Copeland), 4078, Lasting boots.
 — (Shaw), 4088, Lubricating.
 — (Gordon, Currier & Colby), 4109, Harvesters.

- Lake** (*Becker*), 4171, Railway couplings.
 — (*Fraçois & Dubois*), 4190, Compressing air.
 — (*Montmagnon*), 4191, Paper-pulp and alcohol.
 — (*Kerr*), 4217, Bores of gun barrels.
 — (*Coleman*), 4230, Protecting and ventilating build-
 [ings and ships.
 — (*Griswold*), 4313, Feather dusting brushes.
 — (*Wiegand*), 4316, Furnace grates.
 — (*Bell*), 4343, Compound for, and surfacing fabrics,
 [&c.
 — (*Terrell*), 4344, Bale bands or ties.
 — (*Pieper*), 4372, Glass-ware.
 — (*Blake*), 4388, Pump and engine cylinders.
 — (*Renard*), 4441, Polishing wood flooring.
Lalande, F. D., 2841, Alizarine.
Lamarque, B., & Bories, J. A. (*Johnson*), 4492, Curbing
 [horses.
Lamarre, E. A. A. (*Johnson*), 214, Compositions for
 [signalling.
Lamb, J. W., & *Hallam, S.*, 3955, Water-gauge fittings.
 — *J. W.*, & *Lowe, S.*, 4074, Knitting machinery.
Lambert, C., 2865, Gutterings for buildings.
Lambert, C. L. (*Clark*), 1634, Retouching photographs.
 — (*Clark*), 3633, Carbon photographs.
 — *D.* (*Bonneville*), 110, Coal pit wagons.
Lambert, F., 4369, Grapnels for raising cables.
Lambrecht, W. & Wipern, F. (*Lake*), 3351, Galvano-
 [hydrostatic apparatus.
Lamont, J., 3, Gas-making.
 — *J.*, 226, Waterclosets and cisterns.
 — *J.*, 1923, Stoppering-bottles and stoppers.
Lancaster, J., 46, Horse-shoes.
 — *T.*, 32, Supplying fuel to furnaces.
 — *W.*, & *Dollander, E.*, 1569, Sizing yarns, &c.
Landau, M. I., 768, Lamps and burners.
Lane, T., 2975, Economising fuel in fire-places.
Lang, J., *Westly, T.*, & *Bibby, W.*, 2143, Shuttles.
 — *W. C.*, 4378, Steam-boilers.
Lange, C., 4368, Horological instruments.
Langen, E. (*Wirth*), 2360, Charcoal furnaces.
 — (*Wirth*), 2606, Refining sugar.
 — (*Abel*), 2734, Loaf sugar.
Lara, D. de, & Sewell, H. T., 3266, Preventing injury to
 [vessels.
Larier, D., & Griscom, S. E. (*Haseltine*), 1129, Millstones.
Large, T., 3754, Signalling upon railways.
Lartigue, H. (*Clark*), 3771, Electrical commutator.
Larue, J., 1076, Umbrellas and parasols.
La Rue, W. T. de, & Shaw, W. T., 311, Date indicators.
Lascelles, C. T. E., 3257, Gas-engine motors for tram-cars.
 — *C. T. E.*, *Hall, J.*, & *Kirkwood, J. T.*, 4408,
 [Locking, &c. tram-car wheels.
 — *C. T. E.*, *Hall, J.*, & *Kirkwood, J. T.*, 4410,
 [Tram-car motors, breaks, &c.
 — *W. H.*, 2324, Ribs for roofs, &c.
Las-Marismas, A., Marquis of (*Vaughan*), 2257, Air-
 pumps.
Latham, E., & *Turton, T.*, 690, Transshipping cargo.
Lathrop, L. W., & Hayes, J. (*Clark*), 2835, Sewing-
 [machines.
Latour, H., 3948, Picking, carding, &c. fibres and rags.
Laubarede, C. (*Baud & Saulxures*), 3982, Beer.
Laubereau, J. (*Stevens*), 2364, Motive-power engines.
Launders, A. O., *Weeks, A. W. G.*, *Deal, G.*, & *Lillywhite,*
 [G., 1754, Hot-water apparatus.
Lauth, B. C. (*Sleath*), 549, Metal rolls, pipes, wheels, &c.
Lavandier, A. (*Brandon*), 3161, Soap, pomades; cosmetics.
Laveissière, J. J., 1762, Refining and purifying metals.
Lavers, J. V. (*Newton*), 3178, Filtering and purifying
 [water and other liquids.
Lawden, T. T., & *Thomas, J.*, 3548, Fire-arms.
Lawrence, J. & S., 3091, Pocket apparatus for marking, &c.
- Lawrence, P.*, 982, Extinguishing fires.
 — *S.*, & *Hawkins, F.*, 2214, Expansion governors.
 — *S. & J.*, 3091, Pocket apparatus for marking, &c.
 — *W. T.*, 3180, Excavating clay and earth.
Lawson, A. T., 4245, Preparing and spinning fibres.
 — *J.*, 2863, Preparing fibres.
 — *T.*, 4323, Preparing or treating fibres.
Lawton, J. W., & Tracy, H. R. (*Clark*), 363, Cabinets.
Lay, J. L. (*Caldwell*), 1673, Torpedo boats.
Laycock, R., 3685, Loom shuttles.
Lazenby, J., 113, Umbrellas, parasols and sunshades.
Lea, W. E., 223, Hydraulic motive-power engines.
Leach, James & John, 1860, Door fasteners for wagons.
 — *John & James*, 1860, Door fasteners for wagons.
Le Bacq, F., 221, Horse-shoes.
Lebacq, F., 965, Boxes for sardines, &c.
 — *F.*, 3194, Metal boxes for sardines, &c.
Le Belleguic, P. J. (*Hunt*), 2643, Railway breaks.
Leber, J., 545, Cutting paper and pasteboard.
Le Boulengé, P. E. (*Bonneville*), 1003, War instrument.
Lecerf, H., *Girvan, J.*, & *Cathro, J. J.*, 394, Ornament-
 [ing paper.
Leclanché, G. L. (*Newton*), 2462, Electric batteries.
Ledbrook, J., & *Mills, J. H.*, 487, Railway signals.
Ledingham, A. W., 1041, Cleaning gas-retorts.
Lee, C. B., & Jenkins, C. C. (*Johnson*), 3176, Marine
 [governors.
Lee, E., 1137, Producing ornamental designs on glass, &c.
 — *E.*, 2623, Producing designs.
 — *J. W.*, 1490, Direct-acting pumps.
 — *W.*, 4280, Universal chucks.
Leeb, J. L. (*Bonneville*), 471, Table tops.
Leech, W., 4148, Signals.
Leeming, T., *Ray, R.*, & *Lynde, F. G.*, 3704, Bronzing
 [paper.
Lees, T. H. K., *Jackson, W.*, & *O'Hara, T.*, 2399, Pre-
 [paring fibres.
 — *W.*, & *Davies, G.*, 1042, Fringing fabrics; weaving.
Lefebvre, J. E., 1637, Lamp wicks.
Lefèvre, A. F., 2580, Portable heating apparatus.
 — *E.*, 927, Copying presses.
Leffler, C. J. L., 1229, Casting ingots.
Leigh, Ebenezer, & Porri, J., 1279, Gas.
 — *Evan*, 4320, Roads and tramways.
 — *Evan A.*, 398, Carding and spinning fibres.
Leighton, C. H. (*Lake*), 261, Lamps.
Leiper, A., & *Black, N.*, 2013, Economising fuel, &c.
Leiter, J. (*Wirth*), 4192, Syringes.
Lejeune-Vincent, H. (*Murdoch*), 4039, Looms.
Lelièvre, A. A. (*Lake*), 2149, Catapasm or compress.
 — *G.* (*Dufrené*), 2971, Motive-power.
Le Luyer, P. F. M. (*Johnson*), 2084, Bearing springs.
Le Mesurier, W. H., 2594, Concrete.
Lemeunier, L. J. F., & *Martin, C. A.*, 3791, Heating.
Lemmens, A. (*Gottheil*), 36, Dyeing warps.
Lemon, C. (*Imray*), 822, Electric telegraphs.
Le Moyné, J. H., 4199, Loom shuttles.
Lenègre, L. A. (*Durr*), 2769, Bevilling cardboard edges.
Lenzfeldt, — (*Pollak*), 1687, Preserving the yolk of eggs.
Léniau, L. V., 2954, White metallic alloy.
Lenoir, A. L. (*Browne*), 1520, Asparagus tongs.
 — *F.* (*Dewynter*), 430, Purifying gas.
Lenoir, F., 1589, Carburetting gas.
Lenox, G. C. L., 67, Holding chain cables.
Leon, L., 8, Fire-escapes.
Leonard, W. A. (*Chandor*), 1480, Ignition fuses.
 — (*Chandor*), 3717, Ignition fuses.
Leonardt, D., & *Hewitt, H.*, 2855, Boxes for pens, &c.
 — *F.*, & *Gilbert, W.*, 434, Pen and other boxes.
Leoni, S., 629, Heating and cooking apparatus.
Lepet & Co. (*Gedge*), 2514, Metal furnaces.
Lesage, A. L. J. (*Murdoch*), 97, Obtaining potash.

- Lescuyer, A. G., 1460, Fire-arms.
 Leslie, B., & Molesworth, G. (Batho), 2869, Railways.
 Lester, C. E. (Byron), 2751, Fuel.
 Lester, R., & Fallows, W. L., 2007, Puddling furnaces.
 — T., 2617, Photographic apparatus.
 Le Tellier, A. (Wise), 2496, Purifying water.
 Leveson-Gower, G. G. W. Sutherland- (Duke of Sutherland), 319, Steam cultivators.
 Levett, J. S., 2673, Safety swimming apparatus.
 — J. S., 4461, Instructing in swimming, &c.
 Lévy, G. (Hache), 301, Gas-pressure indicator.
 Lewis, A. & G., 252, Trucks or barrows.
 — A. C., 1045, Steel furnaces.
 — G. & A., 252, Trucks or barrows.
 Lewis, G. S., Bates, F. G., & Kellogg, C. H. (Clark), 3713, Paper bags.
 Lewis, James, 2401, Breaks.
 — John, & Jones, W., 2309, Compressing fuel, &c.
 — John, & McIvanna, F., 4302, Studs.
 — John W., & Wood, G., 180, Stoves or ranges.
 Lewthwaite, J., 2313, Fire detectors.
 Ley, W., & Shearer, G., 2911, Tube plug or stopper.
 Leydet, A. (Clark), 2555, Preventing radiation of heat.
 Leyland, S., & Garnett, T., 2909, Earth-closets.
 Liancourt, C. A., Count de G. de, 909, Swimming belt.
 — C. A., Count de G. de, 3519, Life belts.
 Libotte, N. (Hughes), 157, Safety cages for mines.
 — (Hughes), 2435, Safety cages for mines.
 Liddell, J., 1161, Brick-making.
 — J., 3492, Brick-making.
 Liddicott, P., 970, Plate warmers.
 Liebing, H., & Neuhaus, M., 1875, Screw bolts and nuts.
 Lietar, B., & Dupuis, J. H. (Murdoch), 4271, Screw [taps].
 Lighbody, A. & W., 523, Lamp burners.
 — W., 117, Lamps.
 — W. & A., 523, Lamp burners.
 Light, C. L., 710, Railway and other wheels.
 — C. L., 724, Wooden blocks for roadways, &c.
 — C. L., 4091, Roads; paving blocks.
 Light Co., Universal Signal (Clark), 2390, Lanterns.
 Lightall, W. A. (Lake), 3853, Distilled water.
 Ligny, A. L. (Clark), 323, Drying and heating.
 Lilburne, J., 2224, Hermetically closing bottles.
 Lillywhite, G., Launder, A. O., Weeks, A. W. G., & [Deal, G., 1754, Hot-water apparatus].
 Lind, W., & Lippman, H. (Salamon), 795, Sewing-machines, &c.
 Lindblad, J. A., & Edey, J., 2604, Buffer springs.
 Lindemann, C. A. H., 1753, Preserving animal and [vegetable matter].
 Lingard, T. T., 4465, Cutting tools and holders.
 Linglin, E., 1461, Regulators or governors.
 Lion, M. L., 2517, Boots and shoes.
 Lionarous, J. C. & Prass, J. P. (Hunt), 2693, Sugar.
 Liotard, C. L. (Gedge), 242, Gas-burners.
 Lippincott, C. A. (Conklin), 237, Condensed milk.
 Lippman, H., & Lind, W. (Salamon), 795, Sewing-machines, &c.
 Lissagaray, H. A. P. (Johnson), 455, Preserving eggs.
 — (Johnson), 885, Manures.
 Lister, J., & Marshall, J., 4467, Steam-boiler furnaces.
 — S. C., 280, Combustion of fuel, &c.
 — S. C., 299, Combing waste silk, &c.
 — S. C., 2063, Combing silk waste fibres.
 — W., 3052, Steering ships.
 Liston, J., 2382, Pipe clay, tobacco pipes, &c.
 Litchfield, J., 798, Punching jacquard cards.
 Little, A. J., 3468, Rudders; hinges and butts.
 — G., & Eastwood, T. C., 762, Combing fibres.
 — G., & Eastwood, T. C., 3213, Preparing and [combing fibres].
 Littlewood, A., 3192, Ovens, &c., for annealing wire.
 — A., 3675, Drawing wire.
 Livesey, J., 3667, Railways and tramways.
 Livesey, J. J., Digby, E. T., Gandy, C., Foyl, W., and [James, E. P. A., 2799, Extract of meat].
 Lloyd, B. S. (Holt, Garrahan, & Cracknell), 2385, Blasting [cartridges].
 — C. M., 2904, Window frames; hanging sashes.
 — C. M., 3622, Tenoning and cutting flat surfaces.
 — F. H., 2283, Steam-boilers.
 — F. H., 3833, Tuyeres.
 — G. H., 2069, Steam-boilers.
 Lobdell, G. G. (Johnson), 2384, Steam-boilers.
 — G. G., & Denio, A. O. (Johnson), 1409, Boilers [and furnaces].
 Lockerbie, T., & Harvie, A. N., 2002, Kilns.
 Lockwood, G. E. & J. F. (Johnson), 4200, Carburettors.
 — J. F., & G. E. (Johnson), 4200, Carburettors.
 Lockwood, P. E., 289, Treating beer, ale, &c.
 — W., 993, Pressure valves.
 Loewensohn, J., 162, Packing-case screws.
 Lo Forte, R., & Quintaralle, R. (Clark), 593, Preventing [shifting of ships' cargoes; rudders].
 Loftin, W., Koolman, W., & Isger, A. J., 4160, Printing.
 Lohren, A., 1706, Combing fibres.
 Lomax, H., 2163, Sewing-machines.
 — H., 4205, Sewing-machines.
 — H., & Bradbury, G. F., 263, Sewing-machines.
 Lombardon, P., 3715, Soap.
 Long, O. (Ivimey), 1897, Packing for fragile articles.
 — (Ivimey), 2600, Packing bottles.
 Long, R., 613, Heating flat-irons.
 Longin, R. (Mills), 2540, Pendulums and escapements.
 Longridge, J. A., 4163, Axle-boxes.
 Longworth, T., & Jones, F. L., 3389, Looms.
 — T., & Jones, F. L., 4135, Looms.
 Looker, B., 1585, Heating apparatus.
 Loom Harness Co., Kendrick (Haseltine), 2291, Weavers' [harness].
 Loomis, K. H. (Lake), 1381, Steam-engine governors.
 Lord, E., 146, Sizing and drying yarn.
 — J., 2118, Straightening, measuring, &c. wire.
 — R. H., & Parkinson, C., 2023, Carding fibres.
 Lothrop, H. O., 1780, Ferrules.
 Lott, J., 3930, Preventing potatoe disease, &c.
 — W. F., 4132, Heating and cooking stoves.
 Lotz, W. F. (Bradley & Hubbard), 2952, Suspending [chandeliers].
 Louche, J. H., 3961, Rotary engines.
 Lourdel, C. (Morgan-Brown), 1445, Printing music.
 Louvagny, L. R. R., Comte de Beaurepaire de, 591, Alcohol.
 — L. R. R., Comte de Beaurepaire, 4450, Regulat- [ing exhaust steam for heating].
 Lovell, C. H. (Lovell), 3106, Railways.
 Lovell, T. (Lovell), 3106, Railways.
 Low, J., & Houston, R., 3736, Netting machinery.
 — R., 3638, Condensing steam; refrigerating.
 Lowe, C., 425, Separating, &c. chemical products.
 — C., & Gill, J., 1435, Separating coal tar products.
 — Edwin, 326, Artificial fuel.
 — Ernest, & Beatson, J. S., 1981, Puddling iron.
 — Samuel, & Lamb, J. W., 4074, Knitting machinery.
 — Septimus, & White, S., 636, Railway signals.
 — W., 3453, Dyeing cotton for elastic fabrics.
 Lowne, R. M., 1567, Anemometers and fluid meters.
 Lowry, G., 217, Governors.
 — G., 1746, Breaks for carriages.
 — G., 2515, Registering turnstiles.
 — G., 4131, Beetling; driving piles; stamping, &c.
 Loynd, W., Clayton, R. H., & Harrison, J., 537, Air pumps.
 Loynes, V. E. de (Johnson), 1916, Filtering liquids.
 Lublinski, R., 2046, Umbrella tip fasteners.

Lucas, E. F. R., 317, Anthracene.
 — T., & Clegg, T., 623, Carding engines.
 Luce, G., 1662, Desilvering and refining lead.
 Lüdeke, J. E. F., 1722, Motive-power.
 — J. E. F., 2663, Turbines.
 — J. E. F., 2850, Motive-power; turbines & pumps.
 Ludlow, W. D. (Lake), 1399, Treating rectal diseases.
 Luke, S. A., 2995, Moulding and compressing small coal.
 Lamb, J., 1319, Twisting machinery.
 — J., & Bottomley, S., 2781, Lubricators.
 Lumley, T., 403, Steam-pumps.
 Lund, E., & Hulme, R., 3960, Pumps.
 — J., Willett, G., & Harris, R. J., 2189, Ash-closet.
 — J., Willett, G., & Harris, R. J., 2567, Sewage filters.
 Luntley, P. J., 3575, Bottles and stoppers.
 Lürmann, F., 956, Brick-making.
 Lustig, C. L., 2997, Metal and enamel work.
 Lutschauig, V., 1008, Steering screw steamers.
 Luyer, P. F. M. le (Johnson), 2084, Bearing springs.
 Lvoff, M. P., 1479, Iron.
 Lyle, W. S., 4068, Rolling tea leaf.
 Lyman, H. A., & Stokes, R., 2740, Busks for stays.
 Lynde, F. G., Leeming, T., & Ray, R., 3704, Bronzing [paper].
 — J. H., 532, Tramways.
 — J. H., 3352, Water-waste preventers.
 Lynn, H. S. (Tobin), 3228, Producing optical illusions.
 Lyon, W. P., 1954, Applying magnetism for curative [purposes].
 Lyte, F., Maxwell, — (Clark), 4308, Ammonia.
 Lytle, W. A., 749, Smelting iron.
 — W. A., 1096, Peat and peat-charcoal.
 — W. A., 1560, Smelting iron.
 — W. A., 2446, Treating sewage.
 — W. A., 2930, Furnaces.
 — W. A., 2984, Iron and steel.
 — W. A., 3761, Smelting iron.
 — W. A., 4080, Iron and steel.

M.

Maardt, J. G., & Erichsen, E. J. (Jensen), 1072, Pro-
 [ducing and utilising gas and heat.
 Maas, J., 2286, Indicating and registering fares, &c.
 Macabies, P. N. J. (Verdier), 4290, Meter & boiler feeder.
 McAdam, J., 3966, Pulley blocks.
 — W., 1529, Bricks.
 — W., 3949, Glass furnaces.
 — W., 4028, Glass furnaces.
 Macaulay, H., 3163, Steering vessels.
 McBeath, C., 601, Retorts or stills.
 Mac Callan, G., 444, Reflectors.
 McCarthy, J. H., 1179, Steam-boiler tubes.
 McCloskey, J., & Folk, D. C. (Newton), 4128, Sewing-
 [machines].
 McComb, J., & Squire, E., 3646, Revolving cutter.
 McCool, J., 1712, Sockets; lowering, &c. telegraph posts.
 McCune, J. B. (Wanzer), 2420, Sewing-machines.
 McDonald, D. & J., 4146, Marmalade.
 — J. & D., 4146, Marmalade.
 Macdonald, W. S., 1375, Steam-boilers.
 McDougall, Alexander, 2208, Insect-destroying compo-
 [sition].
 — Arthur, 3003, Sulphates of soda and potash.
 — I. S., 1311, Alkali and other furnaces.
 — I. S., 2759, Fire-bars.
 McDowall, J., 3203, Cut nails.
 McKvoy, C. A., 2088, Torpedoes.
 Mac Ewan, E., 3105, Ornamenting surfaces.

Macfarlane, D. & F., 1825, Consuming smoke in furnaces.
 — F. & D., 1825, Consuming smoke in furnaces.
 Mc Feely, M., 522, Distilling spirits.
 McGaw, S., Easton, A., & Pritchard, W. W., 2958,
 [Embroidering].
 McGee, J. H., & Risher, T. A. (Haseltine), 807, Steam-
 [engines].
 Mac George, I. M., 618, Regulating speed of engines.
 MacGeorge, W., & McNeil, J., 51, Water tubes for boilers.
 McGlasson, R., 2845, Valve gear for steam-engines.
 McGrigor, A. B. (Robertson), 2047, Artificial stone.
 McHarg, G., & Carnduff, W., 978, Cigars and cigarettes.
 McIlvenna, F., & Lewis, J., 4302, Studs.
 McIlvride, A. B., 3175, Drapers' and other boxes.
 McInnes, J., & Steel, J., 74, Railway breaks and signals.
 Macintosh, J., 234, Cigarettes.
 — J., 447, Insulating telegraph wires, &c.
 — J., 449, Roads and ways.
 — J., 1714, Boring, &c. rocks; dressing stone.
 — J., 2945, Hardening glass, &c.
 — J. M., 849, Closing bottles, &c.
 McIntyre, J., 3225, Purifying sewage waters.
 McKay, B. T., 1369, Coloring blocks for floorcloths, &c.
 Mackay, F. N., & Siddeley, J., 3425, Ice-making.
 — G., 3751, Purifying liquids.
 — J., 1297, Drilling apparatus.
 — M., 2709, Solvents for resins.
 McKay, W., 3460, Heating by gas.
 McKellen, S. D., 1505, Impelling pendulums.
 Mackenzie, G. N., Brocchus, P. E., Morris, G. W., &
 [Robinson, J. S. (Benson), 64, Furnaces].
 Mackenzie, T., 2428, Steam-pumps and blowers.
 Mackie, A., & Waldenström, E. H., 2510, Perforating
 [paper, &c].
 — S. J., 440, Signalling on trains.
 — S. J., Fauré, C. A., & Trench, G., 2062, Explo-
 [sive compounds].
 — S. J., Fauré, C. A., & Trench, G., 3612, Explo-
 [sive compounds].
 McKinley, R. (Clark), 438, Hoeing, &c.
 Mackintire, J., 4469, Casting metals.
 Mackley, G. T., 2281, Horse and tip nails.
 Macklin, A., 2132, Ventilating railway carriages.
 — A., & Moore, W. E., 3733, Storing explosives.
 Maclean, A. H., 3263, Feeding fibres to carding engines.
 McLean, J. P. (Brewer), 2629, Clasps for stays, &c.
 MacLean, R., 395, Preventing railway accidents.
 McLeish, R., & Hall, W. S., 2258, Watering apparatus.
 MacLeod, A. C., 2705, Projectile for guns.
 Macleod, M., 3994, Concrete buildings.
 McLuckie, T., 2036, Tobacco pipes.
 Mac Martin, A. Curtis, 1594, Agricultural implements.
 Mac Millan, A., 4071, Buttons and fastenings.
 McMillan, D., 150, Cleaning machinery belts.
 Macmillan, N., 240, Finishing woven fabrics.
 McMyn, J. K., & Taylorson, T., 2689, Mules for spinning.
 Macnab, W., 127, Steam-boilers.
 McNabb, W., 3296, Compressing merchandise.
 McNally, J. T., 1518, Separating flour from bran, &c.
 McNaught, J. W., & W., 1388, Steam-engines.
 — J., W., & W., 3264, Steam-engines.
 — W., 2482, Diminishing the rolling of ships.
 — W., J., & W., 1388, Steam-engines.
 — W., J. & W., 3264, Steam-engines.
 MacNaughton, J., 2363, Cartridges.
 McNeil, J., & MacGeorge, W., 51, Water tubes for boilers.
 McNeile, A., 2508, Drying timber.
 Macpherson, W., 2202, Indicator for cabs, &c.
 Mactear, J., 3242, Soda and potash.
 Magny, F., 2723, Fabrics for decorative purposes.
 Magoon, I. P. (Shaw), 758, Locomotive engines.
 Mahler, Adolph & Anthony, 3349, Fabrics for skirts, &c.

- Mähler, Anthony & Adolph, 3349, Fabrics for skirts, &c.
 Maigron, F., 1822, Spinning, doubling and twisting.
 Makin, S., & Skerratt, W., 453, Spinning.
 Malam, W., & Graves, T., 3240, Treating hydro-carbons
 [for heating, &c.
 Malcolmson, H., 1620, Roller skates.
 Maldant, E. C. (Lake), 342, Wet gas-meters.
 Mallat, J. B. (Tongue), 4006, Inkstands.
 Malligand, P. M. E., & Brossard-Vidal, M. E. E. (Clark)
 [1885, Ebullioscopes.
 Mallinson, J., 752, Steam and other cocks.
 Mallory, W. H. (Hughes), 2277, Steering propellers.
 Manbré, P. L., 3639, Gum, glucose, &c.
 Mance, H. C., 3390, Telegraphing by reflected light.
 Manchester, J., & Turner, W. A., 2311, Gassing yarns.
 Mandelbaum, L. H., & Chamberlain, O. McC. (Tongue),
 [1525, Transmitting motion on railways.
 Manico, E. J. C., & Chapin, W. B., 814, Railway breaks.
 Manley, W. R. (Bousfield), 58, Engines and pumps.
 Mann, G., Pollard, C., & Watt, P. B., 1640, Printing.
 — W. T. (Watson), 356, Cranes.
 — (Risien), 1466, Feed-water heater, &c.
 — (Watson), 3725, Cotton presses.
 — (Watson), 4427, Presses and pumps.
 Manning, A., & Tydeman, B., 3845, Beating casks.
 — J. A., 2676, Treating excreta; disinfecting.
 Manoury, H. A. J. (Johnson), 1736, Sugar.
 Mansley, J., 78, Compound engines.
 Manson, W., 1603, Pneumatic hammers, &c.
 Manwaring, W. G., & Samuelson, B., 3305, Harvesting
 [machines.
 — W. G., & Samuelson, B., 3921, Harvesting
 [machines.
 Maplesden, J., & Buss, W., 361, Ploughs.
 Mappin, J. N., 2151, Bottle holders.
 Maquet, H. J., 2670, Hand or guard railings.
 Marchand, H. E. (Bonneville), 1170, Breaks & couplings.
 Marchant, J., 415, Safety signals for railway points.
 — R. M., 509, Motive-power engines.
 — R. M., 1946, Ice-making and refrigerating.
 — R. M., 3189, Air, steam and caloric engines.
 — R. M., 3190, Motive-power engines; gas.
 — R. M., 3843, Gas.
 Marescot, A., 1969, Charging liquids with gaseous bodies.
 Marismas, A. A., Marquis of Las- (Vaughan), 2257
 [Air-pumps.
 Marlow, J. B., Roebuck, J., & Fallows, J. T., 274, Rail-
 [way points.
 Marot, L. (Johnson), 2713, Treating saccharine solutions.
 Marrel, Brothers (Johnson), 663, Armour plates.
 Marriott, E. (Duley), 976, Artificial fuel.
 — R., 3290, Steam-boilers.
 Marsden, B., 1437, Bolts, rivets and spikes.
 — H. R., 1937, Crushing ores and breaking stones.
 — R., 2695, Horse-shoes.
 — S., 1615, Fastening metallic bale bands.
 Marsh, C., & Sparkes, A. L., 1147, Indicating temperature.
 — T. H. (Kinney), 1865, Clamping tools.
 — W. R., 3796, Treating rice.
 — W. R., 3810, Barley mills.
 — W. R., 3811, Riddle for separating rice.
 Marshall, E. (Clark), 1323, Washing machines, &c.
 Marshall, J., 85, Thrashing machines.
 — J., 460, Portable steam-engine furnaces.
 — J., 1792, Thrashing machines.
 — J., & Lister, J., 4467, Steam-boiler furnaces.
 — L. C., 3738, Carding flax tow.
 — N., 2809, Circular looped fabric machines.
 — W., & Crosskill, T. A., 118, Wringing and
 [mangling.
 Marston, W. Y., 3395, Holders or files.
 Martin, Abraham, 1836, Life-saving; lowering weights.
 Martin, Abraham, 1921, Propelling vessels.
 — Albert, 2236, Clipping animals.
 — Albert, 2538, Clipping animals.
 Martin, C. (Bonneville), 2536, Spinning fibres.
 Martin, C. A., & Lemeunier, L. J. F., 3791, Heating.
 — J. T., 1155, Corks.
 Martin, M. (Lake), 3248, Dressing flour.
 Martin, R., 2635, Clipping animals.
 — S. B., 936, Ice-making, &c.
 — T., 3165, Lamps.
 — T., 3247, Lamps.
 — T., 3838, Lamps and lighting same.
 — T. J., 3522, Affixing labels to bottles.
 — W., 4480, Portable closets or commodes.
 — W. A., 880, Fire-bars.
 Martineau, G., 3027, Loaf sugar.
 — G., & Gill, C. H., 3332, Purifying sugar so-
 [lutions.
 Martiny, J. L. (Browne), 2848, Multiplying figures.
 Mason, Cornet, Houdart & Co. (Newton), 1349, Furnaces.
 Mason, A. (Carter), 3878, Barrels.
 Mason, E. & T., 821, Cleaning silk waste.
 — H. E. N., 4004, Oil lamps.
 — S., & Alcock, M., 1436, Utilizing waste heat.
 — T., 99, Mounting and fastening stereotype plates.
 — T. & E., 821, Cleaning silk waste.
 Masse, J., Webster, W., & Bodet, L. G., 3277, Stamping
 [documents.
 Massie, J. (Kellogg), 3079, Sewing-machine attachments.
 — (Kellogg), 3081, Sewing-machine attachments.
 Mather, J. & Spier, R., 4386, Condensing vapors, &c.
 — W. (Clausolles), 3910, Measuring liquids, forc-
 [ing fluids, &c.
 — W., & Dodge, J., 2022, Steam-generators.
 Mathieson, J., 238, Torpedoes.
 Matters, J., Wrigley, T., & Bradley, G., 2756, Condensing
 [smoke.
 Matthews, F. C., 1210, Fire-grates and stoves.
 — H., 1973, Preventing back-flow from sewers.
 — H., 3868, Removing gases from sewers.
 — J., 3586, Steam-boilers.
 — J. M., 3564, Locking, &c. carriage doors.
 — W., 2154, Lifting, &c. blocks of stone, &c.
 Mattos, W. S. de, 1325, Railway couplings.
 Mauger, V. E. (Bickerton), 2963, Paper-cutting ma-
 [chines.
 Mault, A. (Jensen), 2543, Peat-fuel.
 Maw, A., 264, Moulding plastic materials.
 Maxwell, J. R., & Cope, E. (Benson), 1086, Steam-
 [engines.
 — J. R., & Cope, E. (Benson), 3361, Steam or
 [air-compressing engines.
 Maxwell-Lyte, F. (Clark), 4308, Ammonia.
 Mayer, A., 1082, Bricks, tiles, &c.
 Maynes, J., 306, Turning and cutting wood, metal, &c.
 — J., 2598, Turning and cutting wood, metal, &c.
 Mayol, M., 3610, Gymnastic apparatus.
 Mayor, T., Chatterton, G., 3854, Spinning.
 Mayour, A. M. (Gedge), 3078, Cemented lithographic
 [stones.
 Mead, W., 3597, Pianoforte digitorium.
 — (Newbery), 4409, Ships' bulwarks; life preserving
 [rafts.
 Meadows, W., 1100, Saw frames.
 Meaker, J. W. (Haseltine), 937, Hoistway doors.
 Meakin, G. F. L., 2839, Securing ridging to roofs.
 Meatyard, E. B. (Lake), 3046, Railway carriage wheels.
 Meech, H. B., 3484, Floorcloth, &c.
 — H. B., 3821, Obtaining fibres.
 Meech, H. B. (Tiffany), 2956, Paper-pulp.
 Megill, E. L., Stockwell, H. B., & Merrill, J. W. (Newton),
 [3782, Lighting gas; fulminating compounds.

- Mégy, L., De Echeverria, J., & Bazan, F., 8656, Speed [regulators].
- Mehl, E. (Gottheil), 21, Treating wool.
- Meidell, F. V. B. (Jensen), 2523, Fire-proof material.
- Meldrum, E., 559, Fire-places.
- Mellard, J., Sykes, J., & Bateman, T. S., 145, Rolling [metals].
- Mellon, E. (Clark), 3970, Securing tires on wheels.
- Mellor, H. M., & Woodward, L., 639, Knitting machines.
- W., Wigzell, E., & Pollit, J., 794, Piston packings.
- W., Wigzell, E., & Pollit, J., 2415, Cutting fabrics.
- W., Wigzell, E., & Pollit, J., 4085, Driving belts.
- Melville, D., & Smith, A., 1814, Treating wool, &c. for size.
- Membré, P. A. (Salomons), 3788, Weaving.
- Ménard, T. Y., 2906, Carriage breaks.
- Ménier, E. L. A. (Alexander), 3814, Opening oysters, [cutting bread, &c].
- Ménier, J. S. A., 1144, Hot-air balloons.
- Mennig, A. & H. (Morgan-Brown), 3534, Blowing [machines; preparing fibres for felt].
- H. & A. (Morgan-Brown), 3534, Blowing [machines; preparing fibres for felt].
- Menzies, J., 735, Shuttles.
- Mercer, T., & Duckett, G., 4, Size.
- Méritens, A. de (Johnson), 8431, Tanning.
- A. de, & Kresser, V. (Henry), 1132, Sugar.
- Merlin, P., 905, Match boxes, &c.
- Merrell, H., Dean, S., & Smith, W. H. (Haseltine), 2001, [Millstones].
- Merriam, L. P., 870, Soldering metals.
- Merrill, G. (Byron), 2750, Sewing-machines.
- J. W., Megill, E. L., & Stockwell, H. B. (New- [ton]), 3782, Lighting gas; fulminating compounds.
- Mersanne, F. E. de (Johnson), 1446, Electric-light.
- Mersereau, W. T. (Lake), 1788, Dog collars.
- Mesick, P., Wheeler, S., & Jerome, E., 1701, Boxes.
- Messier, V. (Vaughan), 1443, Whetting graving tools.
- V., & Patron, C. (Vaughan), 2117, Pen holders.
- Mestre, A. de (Bonneville), 683, Wiring bottles.
- J. A. de (Bonneville), 3271, Securing bottle corks.
- (Bonneville), 3272, Corking bottles.
- Mesurier, W. H. le, 2594, Concrete.
- Metcalf, A., & Gibbons, W. (Watts), 3517, Valves.
- Mewburn, J. C. (Chalume), 156, Textile fabrics.
- (Verlind), 850, Raising and lowering weights.
- (Sée), 1298, Cleaning yarns.
- (Delannoy et fils), 2301, Combing machines.
- (Weston), 2842, Steam-gauge cocks.
- (Saladin), 3344, Collecting & binding corn, &c.
- Mewis, G. E., 3481, Lines, cords and ropes.
- Mey, S. C. van der (Ansingh), 1933, Preventing railway [collisions].
- Meyer, L. O. P. (Lake), 2402, Safety match igniters.
- Meylert, A. P. (Lake), 2006, White lead and lime.
- Michalet, F., & Bourget, P. (Clark), 3401, Embroidering.
- Micheé, P. P. F., 284, Tannin and canocarpine.
- P. P. F., 957, Tannin.
- Michel, A., 4103, Hives for breeding oysters.
- Michell, F. B., 3358, Bottle stoppers.
- Michelsen, C. A. D. W., Sieber, C. A., & Glamann, J. H., [(Newton), 2525, Smoke-burning].
- Middleton, E. E., 409, Lengthening ships.
- E. E., 1470, Lengthening ships.
- Midgley, J., 4273, Carding-engines.
- (Cockcroft & Ackroyd), 1364, Ring twistors.
- Milburn, R., & Jackson, H., 1006, Steam-generators, &c.
- Miles, D. (Johnson), 761, Preserving eggs.
- Millar, A., 1899, Composing type.
- Miller, A., & Bowen, O., 3324, Decomposing noxious gases.
- G. & J., 2040, Purifying paraffin.
- G., & Raine, B. W., 2916, Horse shoes.
- J., 241, Glue.
- Miller, J. & G., 2040, Purifying paraffin.
- J. A. (Brown), 98, Treating fatty matters.
- T. W., 2129, Railway carriage breaks.
- W., 2964, Equalizing or distributing pressure.
- W. J., Swingle, A., & Huntington, F. A., 1141, [Fire-arms].
- Mills, B. J. B. (Rolland & Vankoorde), 635, Wheelbarrows.
- (Klein & Co.), 665, Felt hats.
- (Orne), 1354, Weaving carpets.
- (Rocco & Pautrier), 1405, Raising sunken vessels, &c.
- (Heyl), 1931, Making paper boxes.
- (Longin), 2540, Pendulums and escapements.
- (Sears), 2988, Soldering apparatus.
- (Nielsen), 3355, Wood splints.
- (Teal), 4035, Motors and pumps.
- (Tiffany & Co.), 4076, Escapements.
- D., & Goodyear, C., 2414, Boots and shoes.
- Mills, J. D. (Redgrave & Redgrave), 3593, Railway [couplings].
- Mills, J. H., & Ledbrook, J., 487, Railway signals.
- Millward, J. (Richardson), 1387, Steam-boilers; furnaces.
- Milne, R. D., 2990, Rotary steam-engines.
- Milsted, A., Clark, E., & Taylor, E. J., 1331, Fireproof [buildings, &c].
- Miltimore, G. W., Phillips, M., & Morris, R. H. (Clark), [2498, Axles].
- Milward, V., 3727, Needle wrappers or cases.
- Mimault, L. V. (Johnson), 870, Printing telegraphs.
- (Johnson), 3056, Printing telegraphs and [codes].
- Mirfield, M., & Scott, J., 573, Combing fibres.
- Mirrlees J. B., & Watson, W. R., 972, Pumping engines.
- Mitchell, J. J., 1627, Hoeing turnips.
- N. W., 929, Branding and counting corks.
- W., 740, Motive-power.
- W., 1302, Elevators; shooting and filling sacks.
- Mitscherlich, R. (Newton), 2939, Obtaining fibres.
- Mockford, W. G. S., 1450, Treating guano.
- Moelchaerek, G. R., & Morgan, O. V., 2245, Filters.
- Moffatt, A. C., Allerton, J., & Handscomb, S. H., 4040, [Furnaces].
- R. R., 3288, Ordnance and projectiles.
- Mohr, C., 152, Rivetting joints and seams of boxes, &c.
- C., & Shammon, W., 2218, Dog muzzles.
- Mohrstadt, G. W., & Kight, J., 1710, Sewing-machines.
- Moison, T., 196, Drying textile materials, &c.
- Mole, J. H., 3480, Watch-chains, &c.
- Molesworth, G., & Leslie, B. (Batho), 2869, Railways.
- Molnier, C. (Gedge), 1190, Tawing or dressing skins.
- Molloy, B. C., & Fitzgerald, D. G., 266, White lead.
- Molony, J. F., 2457, Rotary fans for carriages, &c.
- J. F., 2473, Ships' warning apparatus.
- Molyneux, E., 61, Extracting tea.
- Monckton, E. H. C., 265, Magnetic engines, &c.
- E. H. C., 2581, Peat-fuel, &c.
- E. H. C., 3509, Galvanic batteries.
- Moncrieff, W. D. Scott- 868, Locomotive carriages.
- W. D. Scott- 1458, Locomotive carriages.
- Mond, L., 4175, Carbonates of soda.
- L., 4341, Carbonates of soda.
- Mondon, M., 3426, Cutting files.
- Money, F. J., 4182, Hot-air baths.
- Monks, J., 3834, Shaving, or removing hair.
- Montefiore, G., 1139, Advertising by railway tickets.
- G., 2090, Railway tickets.
- Montegut & Barou (Gedge), 2125, Carriage doors.
- Montgomery, W., & Hillcoat, T., 1083, Furnaces.
- Montmagnon, H. (Lake), 4191, Paper-pulp and alcohol.
- Montoisson, J. L. de, 2746, Treating skins.
- J. L. de, 4269, Tanning skins and hides.
- Moore, A., & Brown, S. G., 2675, Pipe wrenches.
- F., 2150, Drying and bumbling wool.

- Moore, H., 2427, Wrought metal tubes.
 — James, 1919, Weaving wire.
 — John, 3244, Boilers and furnaces.
 — Joseph, 1496, Bricks, tiles, slabs, &c.
 — W. E., & Macklin, A., 3733, Storing explosives.
 Moorwood, T. P., 1772, Ingot moulds.
 More, J. W., & Norman, J., 489, Harness saddles.
 Moreau, J. O. E. (Johnson), 4387, Hydrogen gas.
 Morewood, E., & Rogers, J. H., 1009, Tinning metals.
 Morgan, D., & Hammond, G. F., 2130, Packing.
 — F., 1196, Vessels for beer, &c.
 — Henry, 2403, Preventing vibration of windows.
 — Hugh, Eadington, P., & Parkinson, J., 4121, [Weighing machines.
 — J. W., 3847, Annealing pots, retorts, &c.
 — O. V., & Moelchaerek, G. R., 2245, Filters.
 — T. (Elworthy), 4188, Steam-boiler furnaces.
 — W., 1775, Tuyeres and tuyere apparatus.
 Morgan-Brown, W. (Keniston), 5, Boot & shoe fastenings.
 — (Gardner & Pocock), 450, Boots.
 — (Simonds & Ferson), 1282, Tempering.
 — (Callor), 1291, Dressing leather.
 — (Bichford), 1392, Knitting machines.
 — (Lourdel), 1445, Printing music.
 — (Dinsmore), 2383, Stitching & stretching [cloth.
 — (Osgood), 2875, Printers' rollers, &c.
 — (Hotchkiss), 2946, Fire-arms.
 — (Ford), 2972, Counteracting motion in [berths, &c.
 — (Richardson), 2994, Boots and shoes.
 — (Bastie), 3021, Stearine.
 — (Chamberlain), 3110, Transmitting motion.
 — (Hansen), 3148, Preparing china, &c. for [metallic deposits.
 — (Gianoli, Piceni & Donna), 3482, Rail- [way breaks.
 — (Mennig & Mennig), 3534, Blowing [machine]; preparing fibres for felt.
 — (Capen), 3649, Looms.
 — (Fisch), 3732, Soaps.
 — (Ford & Dick), 4104, Suspending berths, [&c.
 — (Harding), 4166, Cannon.
 — (Rose & Rose), 4375, Thrashing.
 Morison, D. P., 3134, Ventilators, fans and blowers.
 — J. A. R., 1476, Roadways and other surfaces.
 — J. A. R., 3744, Roadways and surfaces.
 Morley, S., 3825, Signalling on railways.
 Mornay, F. de, 2787, Centrifugal machines.
 Morrell, J. C., 4247, Drain pipes; treating sewage.
 — R. W., & Parkinson, T. & J., 2416, Sewing- [machines.
 Morrill, J., 267, Pinch-bars.
 Morris, C. E. D., 711, Coating metal plates.
 — D., 1203, Preserving potatoes.
 — E. S., Abel, F. E., & Thomas, J., 4222, Cleaning [tin-plates, &c.
 Morris, G. W., Robinson, J. S., Mackenzie, G. N., & [Brochus, P. E. (Benson), 64, Furnaces.
 Morris, J., 2334, Character-impersonations; costumes.
 Morris, R. H., Miltimore, G. W., & Phillips, M. (Clark), [2498, Axles.
 Morrison, J., 2316, Protecting pencil points.
 — W. R., 3523, Motive-power.
 Mort, T. S., & Nicolle, E. D. (Mort), 1573, Preserving [food, &c.
 — T. S. & Nicolle, E. D. (Mort), 2763, Ice-making, &c.
 Mort, W. (Nicolle & Mort), 1573, Preserving food, &c.
 — (Nicolle & Mort), 2763, Ice-making, &c.
 Mortimer, L., & Sykes, R., 888, Wadding for clothing.
 Mortimer, M., & Bateman, D., 2254, Looms.
 Mortlock, T., 1939, Peeling potatoes.
 Morton, D., 588, Steam-boiler furnaces.
 — F. G., 4285, Separating tin, &c. coatings.
 Morton, J. S. (Clark), 290, Propelling vessels.
 Moscrop, J. B., 812, Doubling and spinning.
 Mosley, A., 1180, Lace machines.
 Motay, C. M. T. du, 4172, Treating silk.
 Mote, F., 729, Horse-hoes.
 Mouillard, A., 3359, Telegraphs.
 Moule, H., 1260, Gas-making.
 Moultray, J. D., 1648, Joints of fishing rods, &c.
 Mouly, F. V., 2566, Heating and ventilating.
 Mountain, J., 3253, Sewing-machines.
 Mouret, L. J. N., 2699, Model globes.
 Mousseron, J. C. T. (Johnson), 73, Warming carriages.
 Mowing & Reaping Machine Co., the Walter A. Wood, [& Cranston, W. Mc I., 2564, Reaping machines.
 Moy, T., 977, Piston and valve rings.
 — T., 2808, Aërial navigation.
 Moyne, J. H. le, 4199, Loom shuttles.
 Muchin, M. (Lake), 2418, Clocks and watches.
 — (Lake), 2761, Governors.
 — (Lake), 3729, Governors.
 Mudge, R. C., 2341, Turning leaves of books, &c.
 Mueller, P. E. (Abel), 1636, Separating silk rag fibres.
 — H. & Koch, R. (Barthel), 3979, Lathes for turning.
 Muir, A., & Bury, W. T., 1154, Making true, mill rolls.
 — J. S., 1288, Gas-making.
 — J. S., 1289, Oil-gas.
 — W. J. Cockburn, & Fidler, T. C., 2890, Rail and [tramway rolling stock.
 Muirhead, H. D., 2136, Transporting passengers, &c.
 — J., 2074, Iron telegraph poles.
 — J., 3663, Electric telegraphs.
 — L. P., 1909, Indicating speed of engines, &c.
 Müller, H., 2773, Centrifugal machines.
 — H., 4458, Carbonates of soda.
 — J. A., 4228, Meters and motors.
 Mundell, J., & Partridge, E. F. (Lake), 1233, Boots, [shoes, belts, &c.
 Munford, A., 4404, Lighting, &c. lamps.
 Munk, T. (Wilson & Candlish), 2391, Cigars.
 Munn, J. C., 3603, Dyeing yarns for warps.
 — J. C., 3615, Dress fabrics for ladies' wear.
 Munnich, J. T. (Tinker), 2633, Testing milk, pigments, &c.
 Munro, B., 3836, Cutting stone, coal, slate, &c.
 Munt, J., & Jacobs, H., 1504, Fire-lighters and fuel.
 Muntz, G. H. M., 3415, Tubes and skelps.
 — P. A., & Sharp, T. B., 667, Condensing fumes.
 Muratori, C., 931, Preserving and fireproofing wood, &c.
 — C., 1524, Artificial leather.
 Murdoch, H. H. (Lesage), 97, Obtaining potash.
 — (Picard), 454, Treating leather.
 — (Shaw), 2246, Joining and closing pipes.
 — (Rettger), 2533, Artificial fuel.
 — (Picard), 2686, Sole leather.
 — (Honnaj), 3583, Carbonizing spent tan, ob- [taining oil, tar, &c.
 — (Lejeune-Vincent), 4039, Looms.
 — (Lietaer & Dupuis), 4271, Screw taps.
 — W., 1844, Marine and other engine governors.
 Murdock, W. M., & Storey, J., 2616, Steel.
 Murphy, C., (Norwood & Cutter), 3888, Dress protectors.
 Murphy, J. L., 2267, Raising and expelling fluids.
 — M., 4355, Treating leather cuttings and waste.
 Murray, R., & Paterson, J., 1721, Preventing fire in [grinding grain, &c.
 — T., & Crighton, S., 3422, Earthenware bottles.
 Murrow, Y. J., 1063, Waterproof plates or panels.
 Mushet, R. F., 2666, Raising fluids.
 Muzzarelli, A., 324, Bleaching animal glue.

Myers, A. G. (Lake), 233, Ventilating and warming.
 Myers, D., 851, Warming or heating.
 Myerson, T., 2273, Blood manure.

N.

Nagel, A. C., & Kaemp, K. H. (Paget), 3719, Centrifugal
 [pumps].
 Nall, J., Goldsmith, G., & Dilkes, J., 2627, Printing
 [types, &c].
 Nangle, W. C., 557, Anti-fouling compound.
 — W. C., 1606, Compound for coating metal, &c.
 Naphegyi, G., 834, Preserving animal and vegetable
 [substances].
 — G., & Conybeare, H., 2106, Zapotine.
 Napier, J. D., & R. D., 580, Winches, &c.
 — J. M., 131, Bottle labels.
 — R. D., 1040, Friction meters.
 — R. D., & J. D., 580, Winches, &c.
 — W. D., 1313, Transporting and delivering coals.
 Nash, C., & Streeter, W. M., 4296, Lacing boots and shoes.
 — T., 4193, Tube brushes.
 National Tube Works Co. (Hunt), 1647, Steam injectors.
 Naylor, E., 4125, Chaff-cutters.
 Naylor, J., 3568, Shirt-fronts and collars.
 — J., & Kitson, A., 891, Fire escapes.
 — J., & Kitson, A., 4178, Raising and lowering.
 — J., Crabtree, W., & Bottomley, W. H., 1439, Looms.
 Neale, J., 1747, Fastenings for carriage lamps.
 — J., & Bartholomew, E. G., 917, Electric signalling.
 Neave, S. J., 4475, Electric telegraph cables.
 Needham, J., 1205, Fire-arms.
 — W., 583, Signalling on railways.
 Negretti, H., & Zambra, J. W., 109, Thermometers.
 — H., & Zambra, J. W., 3114, Thermometers.
 — H., & Zambra, J. W., 3585, Health indicator.
 Nehrlich, H., 1873, Producing cold and motive-power.
 Neill, R. H., & Armstrong, J., 3861, Dressing flour.
 — W., 2575, Fire extinguishing apparatus.
 Nelson, J., 3019, Studs and bolts.
 — J., 3135, Ventilators, fans and blowers.
 Nes, C. M. (Johnson), 10, Steel.
 Neuber, C., & Gercke, K. L. H., 1531, Gas-regulators.
 Neuhaus, M., & Liebing, H., 1875, Screw-bolts and nuts.
 Neuhoff, W., 627, Baths.
 Neves, F., 2886, Hair-brushing machines.
 Nevire, L. (Bonneville), 2590, Boots and shoes.
 — (Bonneville), 2591, Brooms and brushes.
 Newall, R. S., 2077, Muriatic acid gas.
 — R. S., & Bowman, H., 165, Muriatic acid gas.
 Newbery, J. C., & Bright, R. (Bright), 691, Extracting
 [gold].
 — R. W. (Mead), 4409, Ships' bulwarks; life
 [preserving rafts].
 Newbold, E., 385, Furnace bars.
 Newcomb, E., 2722, Car replacer.
 — T. & T. H., 2857, Cutting wood.
 — T. H. & T., 2857, Cutting wood.
 Newell, J., Davies, E., & Turley, J. W., 4338, Peat
 [fuel, &c].
 Newman, E., & Grenfell, H. H., 8607, Working heavy
 [guns, rudders, &c].
 — J., & Cutler, G., 2503, Buttons.
 — W., & Woods, E. F., 2304, Thrashing machines.
 Newnham, B. T., 1515, Landaus.
 Newton, A. V. (Sinclair), 205, Filtering liquids, &c.
 — (Wilbur), 441, Metal tubing.
 — (Babbitt), 459, Steam-boilers.
 — (Silver & Attwood), 873, Pumps.
 — Kelly, 903, Steam generators.

Newton, (Ashworth), 904, Hose couplings.
 — (Davison), 919, Gas retorts.
 — (Rose), 1186, Sewing-machines.
 — (Houdart, Marion, Cornes & Co.), 1349, Furnaces.
 — (Babbitt), 1601, Caustic alkali packages.
 — (Tardani), 1614, Soap.
 — (Gallahue), 1796, Rotary engines.
 — (Schlick), 1856, Rudders.
 — (De Bisschop), 1910, Motive-power.
 — (Leclanché), 2462, Electric batteries.
 — (Michelsen, Sieber, & Glamann), 2525, Smoke-
 [burning].
 — (Court, Barton & Alexander), 2729, Fish hooks.
 — (Ramsay), 2767, Sewing machines.
 — (Stockwell, Merrill & Megill), 3782, Lighting
 [gas; fulminating compounds].
 — (Singer Manufacturing Co.), 3983, Sewing ma-
 [chines].
 — (Willans), 4084, Cooling and ventilating.
 — (McClosky & Folk), 4128, Sewing machines.
 — (Schwartz), 4156, Ribbon looms.
 — (Brooks), 4244, Tubing, shafting and axles.
 — (Nobel), 4342, Sulphuric acid.
 — (Foley, Crump, Condit & Frink), 4445, Vaults, &c.
 — C., & S., 677, Puddling furnaces.
 — G. J., 4066, Twist lace machines.
 — H. E. (Welch), 2197, Gas burners.
 — (Rose), 3380, Embroidery attachments.
 — (Wiles & Adams), 4052, Ironing.
 — R., 106, Fire barn.
 — R., 1972, Steam-boiler and other furnaces.
 — S., & C., 677, Puddling furnaces.
 — W. E. (Phillips), 72, Hydrate of magnesia.
 — (Stone), 94, Electro-magnets.
 — (Stevens), 418, Shears for cutting metal.
 — (Wilson & Folk), 458, Bolsters for spindles, &c.
 — (Wells), 1781, Steam-engines.
 — (Phillips), 1810, Hydrate of magnesia.
 — (Ralph), 1951, Extracting greasy matters.
 — (Baxter), 2050, Compound engines.
 — (Andouard), 2051, Pulp strainers.
 — (Chesebrough), 2451, Antiseptic fertilizer.
 — (Hoe), 2463, Damping paper for printing.
 — (Elmer), 2495, Gas.
 — (Foote & Randall), 2539, Chemical telegraphs.
 — (Tesoriere), 2569, Gas-burners.
 — (Jacques-Andre), 2570, Steam-engines.
 — (Mitscherlich), 2989, Obtaining fibres.
 — (Lavers), 3178, Filtering or purifying water.
 — (Hoe), 3434, Letter-press printing.
 — (Roswag), 3451, Treating metallic substances.
 — (Donner), 3553, Sugar, &c.
 — (Jenkins), 3596, Marine governors.
 — (Goss), 3716, Gunpowder magazines.
 — (Groshens), 3797, Sizing warps.
 Niblock, J. G., Zimmerman, W. H., Alexander, J. S., &
 [Brown H. F. (Johnson), 2501, Cutting coal, &c.
 Nicholas, R., 3995, Rack pulleys for window blinds.
 Nicholls, H. M., 41, Cutting and piling paper.
 — H. M., 2005, Printing machines.
 Nichols, D., & Bryant, H. H. (Haseltine), 3644, Spools.
 Nicholson, B., & Thomas, J., 4443, Ships' anchors.
 Nickols, D., & Salmon, J., 1755, Cutting card-board, &c.
 Nicole, H. J., 3158, Shirt studs, solitaires, breast pins, &c.
 Nicoll, D., 922, Tea, coffee or cocoa compounds.
 — D., 1626, Vessels for aerated liquids, &c.
 — D., 3336, Waterproofing fabrics.
 Nicolle, E. D. & Mort, T. S. (Mort), 1573, Preserving
 [food, &c].
 — E. D., & Mort, T. S. (Mort), 2763, Ice-making, &c.
 Nield, H. W., 3571, Ice-making and refrigerating.
 — S., & Foster, B., 914, Prussiates of potash, &c.

Nield, S., & Foster, B., 2624, Prussiates of potash, &c.
 — T. A., 1055, Steam taps or valves.
 Nielsen, V. B. (Mills), 3355, Wood splints.
 Nillius, F. E. M. (Hunt), 2491, Marine steam-engines.
 Nimmo, G., 1980, Furnaces.
 — G., 4018, Preventing incrustation.
 Nitzke, A., 654, Cartridges.
 Noad, J., 1422, Steel, steel dies, &c.
 — J., 2934, Boats for saving life.
 Noakes, E., 332, Hop kilns.
 Nobel, A. (Newton), 4342, Sulphuric acid.
 Noble, A., 554, Projectiles for rifled ordnance.
 — F. J., 291, Ratchet-braces.
 Nobles, J. C. (Lake), 1201, Steam-engines.
 — (Lake), 2936, Cars or carriages.
 Nolet, P., 4196, Atmospheric engines.
 Nomaison, S. de, 1874, Treating mineral coals by acids.
 Norman, J., 169, Clipping horses.
 — J., 1832, Washing and wringing machines.
 — J., & More, J. W., 489, Harness saddles.
 Norris, R. S., 132, Cutting or getting coal.
 North, H., & Everitt, E. E. (Johnson), 1990, Bedsteads.
 Northcote, G. B., 445, Cleaning boots.
 Northcott, W. H., 944, Steam-engines.
 — W. H., 2205, Steam generators.
 Norton, T., & Hellawell, H., 381, Weaving velvets, &c.
 Norwood, G., & Cutler, F. M. (Murphy), 3888, Dress
 [protectors].
 Not, H., 824, Guide cards or historic albums.
 Notara, C., 890, Separating and cleaning grain.
 Nousse, E. (Henry), 1664, Treating straw, &c. for paper.
 Nugent, E., & Fanning, J., 191, Screws.
 Nuttall, F. D., 1079, Gas furnaces.
 — J., & Taylor, J., 1117, Railway chairs.
 Nuttall, W., Isherwood, T., & Broadbent, C. R. (Clark),
 [1539 Looms].

O.

Obach, T., 1343, Working ferries; winding and hauling.
 O'Brien, J. T., & Contrell, C. C., 3245, Weaving headings
 [for fringes, &c].
 Ocle, F. H., 925, Operating chairs, invalids' couches, &c.
 — F. H., & Woodcock, J., 1661, Slide-valves.
 — F. H., & Woodcock, J., 1806, Lubricating slides.
 Odling, F. J., 3570, Substitute for wood.
 Oesten, G. (Gothel), 6, Measuring heat of fluids in pipes.
 Oesterley, E. (Schwendler), 2235, Duplex telegraphy.
 O'Friel, J., 2500, Artificial stone.
 O'Hara, T., Lees, T. H. K., & Jackson, W., 2399, Pre-
 [paring fibres for spinning].
 Oldershaw, H. A., 472, Boots and shoes.
 Oldfield, J., 2241, Weaving.
 Oldham, T., 1296, Stoppering bottles.
 Oliver, F. W., 3099, Producing designs on show tablets.
 Oliver, J., Walton, F., & Harris, E. (Harris), 2053,
 [Distilling].
 Ollis, T., 2134, Scoring billiards.
 Oppenheimer, D. (Hirsch), 3884, Drain and other pipes.
 — (Jenkins), 4430, Surgical needle.
 — J., 3041, Electric telegraphs.
 Oram, W., 1868, Pumping or forcing air or fluids.
 Ormiston, J. W., 3560, Coking carbonaceous substances.
 Orne, J. F. (Mills), 1354, Weaving carpets.
 Orr, J. B., 517, Obtaining white pigments.
 Osborn, S., 4208, Reaping and mowing machine knives.
 Osborne, D. M., 2754, Harvesting machines.
 Osborne, H. F. (Lake), 3045, Rounding leather.
 Osgerber, W. W., & Day, J., 2519, Removing incrusta-
 [tion].

Osgood, F. (Sawyer), 1593, Tables.
 — J. H. (Morgan-Brown), 2875, Printers' rollers, &c.
 O'Sullivan, C., & Valentin, W. G., 3909, Treating starch
 [for products].
 Oswald, A., W. R., & T. R., 2312, Marine-steam boilers.
 — A., W. R., & T. R., & Weyergang, F. H., 2684,
 [Steam-boilers].
 — T. R., A., & W. R., 2312, Marine steam-boilers.
 — T. R., A., & W. R., & Weyergang, F. H., 2684,
 [Steam-boilers].
 — T. R., & W. R., 2612, Steam-boilers.
 — W. R., & T. R., 2612, Steam-boilers.
 — W. R., T. R., & A., 2312, Marine steam-boilers.
 — W. R., T. R., & A., & Weyergang, F. H., 2684,
 [Steam-boilers].
 O'Toole, T. J. (Lake), 915, Propelling boats and carriages.
 Oustalet, S. (Bonneville), 4206, Coal-bricks.
 Outram, E., & Horton, J., 2080, Steam-boilers & furnaces.
 Owen, A. G. (Clayton), 3050, Slip buckle.
 Owen, R., 1465, Paint.
 Owthwaite, N., 4349, Steam-engines.

P.

Pace, E., & Howard, J. H., 1362, Bundling splints.
 Page, F., 1280, Artificial fuel.
 — F., 2861, Looms.
 — P. S. (Todd), 1853, Car couplings.
 Page, P. S., & Williams, T. S. (Curtis), 24, Lamps.
 Page, R. W., 27, Actuating valves of steam-engines.
 — T., 470, Steam ships.
 Paget, F. A. (Béranger & Stingl), 3613, Purifying waters.
 — (Nagel & Kaemp), 3719, Centrifugal pumps.
 — (Wannick & Köppner), 4354, Steam-engines.
 Paillard, C. (Lake), 3697, Musical boxes.
 Pain, H., 2630, Kitchen ranges.
 Painter, W. (Benson), 121, Pump valves.
 Pakenham, T., 285, Singeing pigs.
 Palmer, T. N. (Delarue), 736, Shirt-front waistcoat.
 — (Wegmann), 823, Preparing meal.
 — (Balna), 4087, Bleaching fabrics & fibres.
 — W., & Empson, W., 2337, Covered buttons.
 — W., & Hopkinson, C., 572, Dressing flour.
 — W. O., 1998, Wheels and axles.
 Pape, E. D., 2634, Vaginal speculum.
 — W. R., 1645, Rifles and shot guns.
 Papeterie de Thode, La Société Anonyme de la (Johnson),
 [3708, Paper-pulp].
 Paris, J., 3905, Smoothing irons.
 Parker, J., 7, Rolling wheel tyres.
 — R., 2771, Travelling ovens.
 — T., & Weston, P. A., 3658, Pumps worked by
 [steam, air, &c].
 — T. L., 2551, Slating roofs.
 Parker, W. F. (Hughes), 4058, Cartridge shells.
 Parkes, A., 2064, Metallic alloys.
 — S. H., 2162, Lamps.
 — S. H., 3464, Lamps.
 Parkinson, C., & Lord, R. H., 2023, Carding fibres.
 — John, Morgan, H., Eadington, P., 4121,
 [Weighing-machines].
 — Joseph, 2331, Sewing-machines.
 — Joseph & T., & Morrell, R. W., 2416, Sewing-
 [machines].
 — T. & J. & Morrell, R. W., 2416, Sewing-
 [machines].
 — W., 4081, Lawn-mowers.
 — W., & Dickinson, A. P., 3991, Looms.
 Parkman, E., 3882, Street lamps.
 — (Forbes), 3379, Lamps or lanterns.

- Parkman, E. (*Spencer*), 3594, Umbrellas and sunshades.
 Parlour, J. T., 1777, Ships.
 Parmelee, H. S. (*Hughes*), 4288, Fire extinguisher.
 Parry, S. P., & *Hughes*, J. (*Lake*) 1700, Bale-ties.
 Parry, D., 3559, Furnaces.
 — J., 2298, Roller-blinds.
 — J., 2300, Swing looking glasses.
 — J., 3897, Furniture castors.
 Parsons, P., & *Pratt*, F. C. (*Wise*), 659, Railway wheels.
 Parsons, J., & *Davis*, B. W., 3887, Letter-press printing.
 — P. M., 879, Fused steel and iron.
 — P. M., 1053, Steel or malleable iron.
 Partridge, A., 2365, Gauging millstone surfaces.
 Partridge, E. F., & *Mundell*, J. (*Lake*), 1233, Boots, [shoes, belts, &c.]
 Partridge, J., 2159, Steam-boiler alarm and water feeder.
 Partz, A. F. W., 3435, Sugar-making.
 Pasco, T., & *Hawkins*, W. M., 2240, Perambulators.
 Passmore, W., 2662, Umbrellas.
 Paterson, H. C., 3325, Bricks, pipes, tiles, &c.
 — H. C., & *Smith*, G. H., 4194, Treating hydro-carbons.
 — J., 45, Capsuling bottles.
 — J., 830, Capsuling bottles, &c.
 — J., & *Murray*, R., 1721, Preventing fire in [grinding grain, &c.]
 — T. G., & *Cleghorn*, J., 1145, Treating asbestos.
 Patron, C., & *Messier*, V. (*Vaughan*), 2117, Pen-holders.
 Patterson, James (*Wichmann*), 410, Steel "railway frogs."
 Patterson, John, 3485, Beetling, stamping and crushing [machine, &c.]
 Pattison, F., 3029, Metal-founders' blacking.
 — F., 3030, Metal-founders' blacking.
 — G. C., 249, Fog signals and alarm bells.
 — J., 1189, Hydraulic apparatus, pumps, &c.
 — J., 2101, Sleigh for carrying crops.
 Pauksch, H. (*Walker*), 4254, Steam-boiler tubes.
 Paul, F. W., 3828, Hats.
 Paulding, G., & *Hepworth*, S. S., 1798, Centrifugal [machines].
 Pauly, A., & *Jones*, T. L. (*Haseltine*), 35, Steam-engines.
 Pautrier, F., & *Rocco*, G. (*Mills*), 1405, Raising sunken [vessels, &c.]
 Payne, Alexander, 2786, Concrete floors and roofs.
 — Alfred, 2893, Sulphur-acids, sulphites & sulphates.
 — D., 998, Printing machines.
 — G., & *Freestone*, J. W., 1541, Night-lights.
 Payne, J. H. (*Whittingham*), 348, Gas-making.
 Payne, W., 2828, Liquid measure.
 Payton, W., 2742, Valves.
 Peacock, J. C., 1065, Stoves.
 — J. C., 2833, Heat non-conducting materials.
 — J. C., & *Bradley*, C. W., 3243, Gas.
 — T., & *Stirling*, J., 3419, Consuming products of [combustion].
 Peak, J., 648, Weights, measures and coinage.
 Pearson, C., *Dean*, J., & *Cowling*, T., 1818, Screw-gills.
 — E., 1175, Waterclosets and taps for same.
 — E., 1176, Taps, cocks and valves.
 — J. T., & *M. H.*, 716, Sewing-machines.
 — M., 2789, Looms.
 — M. H., & *J. T.*, 716, Sewing-machines.
 — T., 2126, Liquid distributors.
 Peck, E., 3248, Window fasteners.
 — S. N., 2541, Couplings.
 Peckham, E. (*Johnson*), 1858, Iron and steel.
 Peel, J., & *Emsley*, S., 47, Looms.
 — J., & *Emsley*, S., 632, Looms and pickers.
 Peer, J. A., 1497, Cutting toothed wheels and racks.
 Peile, S., *Haughton*, J., & *Thompson*, T., 1803, Rakes.
 Pelouze, E. P., & *Audouin*, M. E. P. (*Clark*), 322, Gas.
 Pendlebury, G., 2349, Dress improvers.
 Pendleton, H. G., 3221, Fastenings for solitaires, studs, &c.
 — H. G., 3478, Solitaires, studs, &c.
 Pénard, V., 516, Steam-boilers.
 Péne, J. A., 4047, Steam-engines, &c.
 Penrose, W., & *Richards*, W. F., 3085, Coke.
 — W., & *Richards*, W. F., 3251, Coke.
 Perard, F. (*Schlesinger*), 3049, Frame saws.
 Perch, W., & *Higgs*, P., 2452, Water-pressure engines.
 — W., & *Higgs*, P., 2546, Pistons.
 Percival, H., 2345, Glass.
 Pères, P. F. P. (*Douce*), 3327, Paper bags.
 Perkins, C. H., & *Stowe*, J. L. (*Smith*), 592, Clearing [snow from tramways, &c.]
 Perkins, J. W., 3557, Anodes of nickel for plating.
 — T., 3710, Lifting sacks.
 Perks, F., 2530, Fire-arms.
 — F. & W., 856, Charcoal box-irons.
 — T., 550, Fastenings for brooches, &c.
 — W. & F., 856, Charcoal box-irons.
 Pernod, J. (*Dufrené*), 1074, Treating madder.
 Pernot, C. (*Johnson*), 1317, Steel.
 — (*Johnson*), 1997, Puddling furnaces.
 Perrett, E., 2060, Filtering liquids.
 — E., 2061, Bag filters.
 — E., 3839, Steam tram-cars.
 — E., 4262, Filters.
 Perry, A., 2559, Drying grain, roasting malt, &c.
 — A., 3827, Drying white lead, &c.
 — R. G., 55, Kilns for drying peat, malt, &c.
 — R. G., 3598, Kilns or drying chambers.
 Perry, S. (*Lake*), 585, Hay-tedding machines.
 Peters, S., & *Donald*, W., 1207, Waterclosets.
 Petit, J. L., 4090, Ink-pencil.
 Petrie, J., 43, Washing and dyeing wool, &c.
 Peyer, J. (*Johnson*), 4123, Artificial palates.
 Pfeifer, C. E. F., 1638, Smoothing irons.
 Pfisum, J. F. A., & *Walker*, B., 4129, Pumping; air [compressing].
 Phibbs, E. W., 802, Alcoholic liquids.
 Philipp, W. (*Hirschmann*), 3209, Portmanteaus, &c.
 — (*Hirschmann*), 3210, Clearing grate-bars.
 Philippe, E., & *Pinet*, H., 4243, Casks.
 Phillips, C. H. (*Newton*), 72, Hydrate of magnesia.
 — (*Newton*) 1810, Hydrate of magnesia.
 Phillips, G., & *Holland*, H., 4484, Helical springs.
 — H., 1571, Marine-engine governors.
 — James E., *Innocent*, J., *Rutter*, G. T., & [Hornaby, R., 4174, Reaping and mowing].
 — John, 4082, Lathes.
 — Joseph, 1769, Ventilating buildings and rooms.
 Phillips, M., *Morris*, R. H., & *Miltimore*, G. W. (*Clark*), [2498, Axles].
 Phipson, W. A., & *Underwood*, E., 2229, Blind-rollers.
 Physick, G. B., 3094, Cabinet for stationery.
 Picard, B. (*Murdoch*), 454, Treating leather.
 — (*Murdoch*), 2686, Sole leather.
 Piceni, G., *Donna*, G., & *Gianoli*, G. (*Morgan-Brown*), [3482, Railway breaks].
 Pichard, L. M., 416, Carding engines.
 Pickard, J., 3684, Looms.
 Picken, M. & W., 1703, Vices.
 — W. & M. 1703, Vices.
 Pickering, J., 932, Steam-pumps.
 Pickin, R., 3592, Carriage wheels and axles.
 Pickup, J., 436, Looms for weaving.
 — J., & *Stephenson*, J., 1204, Furnaces and fire-bars.
 Picot, A. E. (*Henderson*), 861, Sheep-shears.
 Pieper, C. (*Lake*), 4372, Glass-ware.
 — C., & *Hahn*, S. (*Haseltine*), 2832, Sewing-machines.
 Pierce, W., & *Hutton*, T. R., 2871, Driving sewing-machines.
 Pieri, J. P., 2727, Cartridges.

- Pieri, J. P., 3014, Fire-arms.
 — P., 1087, Fire-arms.
 — P., & Smith, W., 4073, Projectiles; mounting [ordnance].
- Pierson, C. T. (Gedge), 2588, Solar compasses.
 — (Gedge), 3530, Car-axle boxes, &c.
- Pilkington, E. & Addison, G., 699, Safety-lamps.
 — W. W., 2111, Pipes for acids.
- Pilling, A., 1464, Washing machines.
 — J., 4130, Sizing and preparing yarn.
- Pimbley, J., & Prestwich, J., 4235, Heating feed-water.
- Pindar, A. G., & W., 125, Dressing flour, &c.
 — W., & A. G., 125, Dressing flour, &c.
- Pinder, T. H., 3990, Glazing sashes.
- Pindray, A. de, 1719, Furnaces.
 — A. de, 2876, Steam-boilers.
- Pinet, H., & Philippe, E., 4243, Casks.
- Pinfold, J. D., 743, Brick-making and stacking.
- Pinhey, W. B., 3267, Rotatory engines.
- Pinker, J., & Adamson, T. A., 1236, Screw-propellers.
 — J., & Adamson, T. A., 3066, Removing screw-propeller blades.
- Pinkerton, A., Smith, W., & Hunter, W., 908, Weaving.
 — W., 1568, Signalling in trains.
- Pinkney, R., & Sellon, J. S., 4493, Dyeing and printing.
 — W., & Bainbridge, C. E., 2112, Furnaces, &c.
- Pinnington, C., 732, Paving.
- Pinnock, J. B., 1213, Wagonettes, phaetons, &c.
- Pitchford, W. F., 1468, Soft metal piping.
- Pitts, M., & Ballard, S., 1863, Warming and ventilating.
- Piver, A., 634, Distilling oils or perfumes.
 — A., 1607, Obtaining alcohols.
- Placet, P. E., 1807, Engraving.
- Plant, J., 4033, Legging or gaiter boot.
- Plantrou, C. N. (Johnson), 420, Carding, &c. fibres.
- Platts, G. & Walden, J. (Cheesbrough), 2928, Crimping [leather].
- Plenty, J. T., 1941, Burring and washing sheep skins.
- Plessner, J. M., 4151, Spraying scents and liquids.
- Plimpton, J. L., 4142, Skates.
- Plum, T. W., 3118, Metallurgical furnaces.
- Plummer, J., 1112, Furnaces.
- Plumpton, J. L., 3508, Construction of buildings, &c.
- Plunkett, Hon. J. W., 2233, Steam-boilers.
- Pochet, H., 553, Bottle stopper and drinking vessel.
- Pocknell, G., 4083, Communicating from train in motion.
- Pocock, A. W., 3152, Compensating wet gas-meters.
- Pocock, E., & Gardner, C. F. (Morgan-Brown), 450, Boots.
- Podesta, Baron A. (Cicognani), 1800, Desilvering lead.
- Pointer, G. T. P., & Binaepfel, J., 3360, Dress improvers.
- Pollak, J. (Lengsfeld), 1687, Preserving the yolk of eggs.
- Pollard, C., Watt, P. B., & Mann, G., 1640, Printing.
 — W., & Carter, J. E., 3720, Gas & fluid regulators.
- Polito, L., & Griot, G., 2736, Waterproofing substances.
- Politt, J., Mellor, W., & Wigzell, E., 794, Piston packings.
 — J., Mellor, W., & Wigzell, E., 2415, Cutting fabrics.
 — J., Mellor, W., & Wigzell, E., 4085, Driving belts.
- Pollock, R., 866, Dyeing textile fabrics.
- Pollok, A. (Johnson), 247, Shoe tips.
- Pontifex, E. A., 1733, Drawing and measuring water, &c.
- Poole, G. A., 2351, Indicating depth of water.
- Poole, J. T. (Lake), 473, Life-buoys.
- Pooley, H., & Greenwood, J., 126, Weighing.
 — J. C., 2387, Bread and biscuits.
- Pooley, O. (Cheesbrough), 2800, Couplings and buffers.
- Pope, A. A. (Quackenbush), 2284, Toy guns.
- Poret, E., Buffoy, P. H., Dupré, P. S. E., & Rogé, H. N. ([Clark]), 3392, Preserving wood.
- Poron, A. & C. (Smith), 2774, Weaving.
 — C. & A. (Smith), 2774, Weaving.
- Porri, J., & Leigh, E., 1279, Gas.
- Porter, H. J., 2947, Trusses.
- Portway, H., 2922, Looms.
- Post, W. H. (Talcott), 148, Screws.
- Potel, H. F. E., & Lafaurie, H. F. (Wise), 2650, Lamps.
- Potter, G., 3962, Musical instruments.
 — H., 1690, Bleaching yarns.
 — T., 3945, Concrete buildings.
 — W., 2339, Ticket holders or suspenders.
- Poulsom, W., 52, Unloading ships' cargoes.
 — W., 4037, Unloading ships.
- Pourché, A., 185, Destroying insects.
- Pout, P. G., 1027, Regulating, &c. water-supply to closets.
- Poutiloff, N. (Abel), 1277, Buildings.
- Powell, C. E., 4435, Electric-light.
 — E., 1254, Windows for cabs, &c.
 — J. W., 4413, Water regulators and controllers.
- Powleson, W. L., 2959, Steam-boiler furnaces.
- Powlett, J. A., 390, Steering apparatus for ships, &c.
- Prall, W. E., 979, Utilizing compressed air.
- Prass, J. P., & Lionarous, J. C. (Hunt), 2693, Sugar.
- Pratt, F. C., & Parsons, F. (Wise), 659, Railway wheels.
- Preece, W. H., Goldstone, C., Radcliffe, J., & Gray, M., 3521, Communicating in trains.
- Pregél, T. (Lake), 1731, Steam-hammers.
- Prentice, E. C., 1841, Nitric acid.
 — T., 1498, Screening corn and seed.
- Prestige, J. T., Fowler, J. A., & Preston, F. P. & E. J., 3917, Pumps.
- Preston, F. J. & F. P., Prestige, J. T., & Fowler, J. A., 3917, Pumps.
 — F. P. & E. J., Prestige, J. T., & Fowler, J. A., 3917, Pumps.
 — W., Hoyle, C., & Shackleton, W., 4179, Washing [fibres].
- Prestwich, J., & Pimbley, J., 4235, Heating feed-water.
- Preusser, F. (Wise), 1763, Artificial stone.
- Price, C. W., & Green, H. T., 29, Railway breaks.
 — H. W., & Warn, J., 1986, Clamps.
 — J., 2465, Constructing vessels to facilitate loading.
 — J. T., 2853, Machine ruling.
 — J. W., 747, Sound signalling on railways.
- Prichard, D., & Jackson, W., 4165, Propelling, and break [for vehicles].
- Prideaux, T. S., 4440, Regulating air to furnaces.
- Pridham, T., 4133, Drying tea, &c.
- Priestland, C., & Harrison, F. A., 1791, Adjusting cords [of window blinds, &c].
 — T., 3904, Preparation for eye disorders.
- Priestman, E., & Crook, W., 1592, Combing fibres.
 — E., & Crook, W., 3388, Combing fibres.
- Prior, A., Gibson, J. W., & Kennedy, J. P., 1516, Tobacco [and oil].
- Pritchard, W. W., McGaw, S., & Easton, A., 2958, [Embroidering].
- Proctor, A., & Sanderson, S., 600, Fire-places.
- Proctor, J. (Smith), 3151, Driving sewing machinery.
- Protheroe, J. (Protheroe), 4462, Wicks.
- Protheroe, P. (Protheroe), 4462, Wicks.
- Prowett, W., & Humber, W., 3207, Ploughing, &c.
- Prunty, J. E. (Hambleton), 3899, Admitting continuous [flow of fluids, &c].
- Pryer, G., & Harvey, J., 581, Ships' sails.
- Pughsley, W. J., 4373, Treating refuse "pickle" of tin [plate works, &c].
- Pullein, J., & Conyers, E., 4198, Depilating skins.
- Pullen, M. & W., 1948, Adding together columns of figures.
 — W. & M., 1948, Adding together columns of figures.
- Pullman, A. B., & Allen, R. N., 4265, Railway wheels.
- Pulsford, E., 4442, Covering sugar loaves.
- Pultz, J. P., & Walkley, L. V. (Elsam), 1577, Eyelets.
- Pulvermacher, I. L., 2172, Pin-lock-safety-fasteners.
 — I. L., 3937, Medico-electricity.
 — I. L., 4064, Umbrellas, tents, &c.

Punch Co., Foreign Cancellling (Lake), 1667, Ticket [punches.
Punderford, J. A. (Hughes), 941, Boots and shoes.
Punshon, R., 2589, Rifling fire-arms.
—— R., 3200, Fuel.
Purdie, J., 1427, Rivetting ships, bridges, &c.
—— P., 3689, Budds or sprigs for boots.
—— P., 4067, Nails, budds, sprigs and rivets.
Purkis, R. A., & Gamgee, J., 2621, Refrigerating.
Pye, T. B., 1488, Feeding liquors to fermenting vessels.
Pyne, R. W. M., 4249, Umbrellas and parasols.

Q.

Quachenbush, H. M. (Pope), 2284, Toy guns.
Quin, J., 63, Protecting india-rubber valves, &c.
—— J., 3902, Protecting india-rubber valves, &c.
—— R., 496, Cigar cases.
Quintaralle, R., & Lo Forte, R. (Clark), 593, Preventing [shifting of ships' cargoes; rudders.

R.

Rabbeth, F. J. (Haseltine), 2497, Spindles and bolsters.
Rackham, J., & Cribb, W., 770, Matches.
Radcliffe, J., Gray, M., & Goldstone, C., 3381, Signalling [in trains.
—— J., Gray, M., Preece, W. H., & Goldstone, C., [3521, Communicating in trains.
—— J. H., 1553, Valve oil cans; cutting sheet [metal vessels.
Radeke, W., 1032, Drying and charring peat, &c.
—— W., & Smyth, S. R., 1855, Peat-fuel; carbonizing.
Radford, J., 136, Safety-valves.
—— J., 1321, Cocks or taps.
Rae, M., 1674, Bituminous mastic or cement.
Rafferty, T., 2103, Connecting pipes, &c. to gas mains.
Raggett, G., 1060, Flower and plant cases.
Raine, B. W., & Miller, G., 2916, Horse-shoes.
Raines, W. N., 1713, Packing pistons.
Rainforth, W. & W., 1882, Grain-dressing screens.
Ralph, F. W. (Newton) 1951, Extracting greasy matters.
Ralu, L., & Guyot, J., 3606, Stopping railway trains.
Rammell, T. W., 3813, Centrifugal machines.
—— T. W., 4380, Pneumatic railways and tubes.
Rampant, A. A. (Bonneville), 1561, Drying bagauze.
Ramsay, G. M. (Newton), 2767, Sewing-machines.
Ramsay, H. M., 3889, Water-tight pipe joints.
Ramsden, J. C., 325, Spinning fibres.
—— J. C., 718, Spinning fibres.
—— J. C., 1059, Treating iron, &c.
—— J. C., 2920, Gas.
Randall, C. A., & Foote, T. M. (Newton), 2539, Chemi- [cal telegraphs.
Rankin, D., 3393, Marine-engines.
—— R., 1136, Governors.
Rankine, D., & Carruthers, J. H., 966, Tramways; cars.
—— D., & Carruthers, J. H., 1143, Tramway carriages.
Ransome, F., 1821, Artificial stone.
—— F., 3926, Artificial stone.
Rapier, R. C., 1064, Locks, switches, gates, &c.
Rath, F., 295, Plaited or folded fabrics.
Raven, W., 4266, Ribbed looped fabrics.
Rawbone, W. G. (Codville), 2327, Seed and manure [distributors.
Rawlings, J. P., & Barrett, J., 1725, Steam-boilers.
—— J. S., 3618, Steam-engines.
Raworth, J. S., 2707, Spinning and doubling.

Rawson, A. L. (D'Homergue), 1448, Heating furnaces.
Rawthorne, S., & Hartley, J., 62, Sizing yarns.
Ray, A. (David), 100, Optical illusions.
—— R., Lynde, F. G., & Leeming, T., 3704, Bronzing [paper.
Read, G., 406, Bottle stoppers.
Read, H. F. (Haseltine), 1223, Water-meters.
Read, J. W., 4246, Gumming labels.
—— W. T., 4312, Preserving fermented liquors.
Reade, J., & Hurd, F., 2747, Travelling caps and pads.
Readhead, R., 1942, Steam-boilers.
Reading, J., 994, Attaching ornaments to studs, dress [fastenings, &c.
—— J., & S. A., 3936, Sleeve studs, solitaires, &c.
—— S. A. & J., 3936, Sleeve studs, solitaires, &c.
Reaney, W. B. (Johnson), 4318, Steam-engines.
Reaping & Mowing Machine Co., the Walter A. Wood, [& Cranston, W. McL., 2564, Reaping machines.
Redfield, J. H. (Stevens), 980, Castors.
Redgate, E., & Ellis, J. E., 172, Treating hides and skins.
Redgrave, J. & S. (Mills), 3593, Railway couplings.
—— S. & J. (Mills), 3593, Railway couplings.
Redier & Co. (Johnson), 1587, Indicating pressure, &c.
Redish, W. B., 2055, Fire-grates.
Redmayne, T., 1123, Kitchen ranges.
—— T., & Wright, G., 3466, Kitchen ranges.
Redon & Co. (Gedge), 3376, Motive-power.
—— (Gedge), 3406, Coffee mills, &c.
Redslob, F. A. E. (Abel), 168, Tell-tale pressure gauges.
Redwood, T. B., 3307, Gas.
Reed, E. J., 2565, Propelling ships.
—— E. J., & Wimshurst, H., 3625, Propelling ships.
—— J., 355, Boilers and furnaces.
Rees, J., Thomas, J., & Hopkins, T., 769, Tin andterne [plates.
Reeves, R. H., 1080, Ventilators.
Regan, S., 4218, Steam-boilers and furnaces.
Rehbein, W. G., Roberts, H., & Brocchus, P. E. (Benson), [495, Welding.
Reid, A. Mc B., 3010, Compound for pastry, bread, and [culinary purposes.
—— James, 4001, Locomotive cranes.
—— James, & Webster, J., 4000, Lathes or machine tools.
—— John, & Stevenson, G., 3939, Hauling or winding.
—— John R., & Rowan, T., 1507, Floorcloths, &c.
—— John R., & Rowan, T., 2425, Floorcloths, &c.
Reid, W. J. (Stevens), 837, Bolts and nuts.
—— (Stevens), 1014, Lifting and hauling casks.
Reilly, J., 2586, Four-wheeled carriages.
Reintjens, L. J. (Craps & Derihon), 529, Non-conducting [mastic.
Reissig, W. (Wirth), 2884, Disinfecting candles & pastiles.
Relph, F. H., 2228, Carrying cattle at sea.
Remington, S., 2095, Wood pavements.
Renard, G. (Lake), 4441, Polishing wood flooring.
—— J. F. (Gedge), 130, Steam generators.
Rendel, G. W., 4472, Submarine torpedoes.
Render, F., 535, Elevating grain from ships.
—— F., 3837, Grinding wheat and grain.
Rennick, C. (Tappan), 1396, Artificial butter.
Renshaw, D. (Lake), 1300, Steam-boilers and furnaces.
Reuter, C., 4137, Stamping paper collars, &c.
Revell, J., 3862, Spinning fibres; lubricating.
Rew, G. G., 800, Syphons.
Reynolds, J. & W., 1723, Filling and stoppering bottles.
—— J. & W., 3566, Filling and stoppering bottles.
Reynolds, S. (Cockings), 154, Snaps or connectors.
Reynolds, W. & J., 1723, Filling and stoppering bottles.
—— W. & J., 3566, Filling and stoppering bottles.
—— W. F., 101, Ships' compasses.
—— W. F., 515, Engine speed indicators.
Reynoso, A. F. C. (Hunt), 2160, Preserving food.

- Reynoso, A. F. C. (Hunt), 2181, Ozone and azotic acid.
 — (Hunt), 2255, Sugar-making.
 — (Hunt), 3377, Purifying air.
Rhenish Dynamite Manufacturing Co. (Gottheil), 1566, [Blasting compound].
- Rhind, F., 4089, Lamps.
 Rhodes, G. G., 1029, Railway breaks.
 — S. G., 1073, Gassing and reeling yarns.
 Rich, G. H., 1456, Window-blinds.
 Richards, James, 376, Bicarbonate of soda.
 — John, 2788, Jewellery and dress fastenings.
Richards, P. W., Crain, F. E., & Everitt, J. (Hunt), 2987, [Packing].
 — S. (Haseltine), 3022, Cutting & gauging butter.
 Richards, W., 567, Gas.
 — W., 1393, Indicating receipt of money.
 — W., 3928, Measuring fluids.
 — W. F., & Penrose, W., 3085, Coke.
 — W. F., & Penrose, W., 3251, Coke.
Richardson, A. P., & Harrison, T. W. (Haseltine), 1109, [Looms].
 Richardson, A. T., & Kay, R. H., 387, Silk crape.
Richardson, E. P. (Morgan-Brown), 2994, Boots and [shoes].
 Richardson, G. W., 3866, Pneumatic apparatus.
 — J., 3503, Engines for driving, winding, &c.
 — J. J., 1681, Pointing wire for needles, pins, &c.
Richardson, W. H. (Millward), 1387, Steam-boilers; furnaces.
- Richer, J., 3111, Velocipedes.
 Riehes, C., 1301, Grinding reaping-machine knives, &c.
 Richmond, T. & W., & Baron, J., 501, Looms.
 — W. & T., & Baron, J., 501, Looms.
Ridgway, C. L. (Clark), 1694, Cooling; delivering ale, &c.
 Ridley, J. D., 777, Aërial navigation.
Rietschoten, J. J. van, & Houwens, W. (Appleby), 1283, [Removing sand banks, deepening rivers, &c].
Rigaux, L. (Gedge), 1678, Cutting laces and thongs.
 Rigby, James, O., 3140, Woven and felted fabrics.
 — John & Joseph, 2692, Lighting and ventilating.
 — Joseph & John, 2692, Lighting and ventilating.
 Rigg, A., 3648, Governors and slide-valves.
 — H., & Eaglesham, J., 2171, Cutting and hauling coal.
 Riley, C., 3065, Carriages, wagons, carts, &c.
 Rintoul, J., & Iliff, E., 1795, Pianoforte actions.
 Ripley, F., & Seton, C. C., 1748, Spinning and doubling.
 — F. & Seton, C. C., 3674, Spinning and doubling.
 Rippingille, E. A., 920, Lamps and burners.
 Rischmuller, G., 2721, Motive-power.
Risher, T. A., & McGee, J. H. (Haseltine), 807, Steam-engines.
- Risien, G. W. (Mann), 1466, Feed-water heater, &c.
 Risien, G. W. (Russell), 4094, Treating sugar cane.
 Ritchie, C., 4043, Utilizing heat for cooking, &c.
 — D., & Henderson, A. G., 1801, Refrigerators.
 — G., 1906, Combined bedstead, table, &c.
 — G., 2275, Tents; furniture for same.
 — G., 3195, Muffs and muff linings.
 — G., 3977, Muffs, foot-warmers, &c.
 Roach, F. (Haseltine), 2640, Faucets.
 Robbins, J., Wood, J., & Allbut, J., 3408, Chilled rolls.
Robcis, R., & Sons (Johnson), 2178, Printing type.
Robert, H. (Clark), 547, Clocks.
 Roberts, Abel, 3537, Spinning.
 — Albert, & Wigfull, W., 2413, Reaping machines.
 — Anne, 1467, Venetian blinds.
Roberts, E. A. L. (Abel), 2516, Steam-boilers & engines.
 Roberts, E. L., 2843, Ventilating beds and couches.
 — G. H., 2199, Vulcanite screws.
Roberts, H., Brocchus, P. E., & Rehbein, W. G. (Benson), [495, Welding].
 Roberts, J., 1604, Marine-engine governors.
- Roberts, M. J., 2182, Window-blind roller break.
 — M. J., 3775, Hoisting, &c., weights; driving [machinery].
 — P. D., 4238, Studs and similar fastenings.
 — R., & Bêlicard, J., 3835, Looms.
 Robertshaw, J., 1044, Looms.
Robertson, James M. (McGrigor), 2047, Artificial stone.
 Robertson, John, 116, Indicating, &c. tram-car passengers.
 — John, 1785, Reheating furnaces for metals.
 — Joseph B., 1327, Knitting machines.
 — Joseph B., 3256, Knitting machines.
 — R. A., & Watson, W. R., 2980, Fixing tubes [in clarifiers, &c].
 Robins, W. B., 23, Hydronettes, hand pumps and syringes.
 Robinson, A. H., 717, Meters and motive-power engines.
 — F., 3346, Gas.
 — F. O'C., 1416, Distance indicators for ships.
 — F. O'C., 2438, Preventing incrustation in boilers.
 — James, 1167, Street-sweeping machines.
 — John, 3997, Charging gas-retorts.
 — John, & Smith, J., 656, Shaping wood.
 — John, & Smith, J., 3913, Sawing wood.
Robinson, John S., Mackenzie, G. N., Brocchus, P. E., & Morris, G. W. (Benson), 64, Furnaces.
 Robinson, Joseph H., 1356, Enamelled dial plates.
 — N., & Hird, T., 2146, Looms.
 — O., 3774, Sewing-machines.
 — R., 2718, Bending metal plates and bars.
 — T., 236, Caustic soda boiler.
 — T., 2145, Sulphates of soda, &c.
 — T., & Hargreaves, J., 448, Sulphates of soda, &c.
 — T., & Hargreaves, J., 2018, Sulphates of soda, &c.
 Roby, G., 3920, Vessels for containing gunpowder, &c.
Rocco, G., & Pautrier, F. (Mills), 1405, Raising sunken [vessels, &c].
 Rockliffe, J. W. & W., & Younghusband, G. & G. T., [4079, Preserving composition].
 — W. & J. W., & Younghusband, G. & G. T., [4079, Preserving composition].
 Roddey, P. D. (Cooper), 4041, Bale-ties.
 Roe, J., 2702, Heating, drying and evaporating.
 Roebuck, J., Fallows, J. T., & Marlow, J. B., 274, Rail-way points.
 Rœckner, C. H., 4117, Pulp; recovering chemicals used.
 Rœttger, W. C. A., 3008, Artificial marble.
 Rœttger, W. C. A. (Murdoch), 2533, Artificial fuel.
Rogé, H. N., Poret, E., Baffoy, P. H., & Dupré, P. S. E. (Clark), 3392, Preserving wood.
 Rogers, J. (Clark), 208, Lamp black.
 Rogers, J. B., 3113, Signalling at sea and on land.
 — J. B., 3301, Catch and slip hooks.
 — J. H., & Morewood, E., 1009, Tinning metals.
Rolland, N., & Vanhoorde, J. (Mills), 635, Wheel barrows.
 Rollason, J. G., & Wood, J., 784, Ornamental chains.
 — J. G., & Wood, J., 3600, Solitaires, studs, &c.
 Rollins, J. G. (Kellogg), 4136, Portable forges.
 Ronald, B., & Farmer, J., 1215, Supplying water to [closets, &c].
Rosa, W. V. V., Hitchcock, R., & Sigourney, J. M. (Johnson), [4283, Lamps; spring movements].
 Rose, G. & H. (Morgan-Brown), 4375, Thrashing.
 — H. & G. (Morgan-Brown), 4375, Thrashing.
 Rose, L., 497, Stoppers for aerated liquid bottles.
 — L., & Brown, J., 1253, Screwing bottle necks.
 Rose, R. M. (Newton), 1186, Sewing-machines.
 — (Newton), 3380, Embroidery attachments.
 — W. W. (Jewitt), 1866, Toys.
 Rosenwald, F. A. B., 2370, Paper cravats.
 Rosoman, R. R. L., 2844, Iron-clad and other vessels.
 Ross, W. A., 4414, Aerated waters.
 — W. A., 4415, Bottling apparatus.
 Rostron, J., 3576, Winding yarns or threads.

Rosway, C. (Newton), 3451, Treating metallic substances.
Rothwell, J. U., 2464, Bending timber.
 — *W. G.*, 4072, Screw-propellers.
Roullier, C. M., 2073, Fixing heels to boots.
Roullier, M. (Belier), 218, Mats.
Rourke, M., 3547, Waterproof packing material.
Rowan, T., & *Reid, J. R.*, 1507, Fabrics for floorcloths, &c.
 — *T.*, & *Reid, J. R.*, 2425, Fabrics for floorcloths, &c.
Rowbotham, S., 8554, Bird cages.
Rowbottom, J., 3095, Retorts; charging and discharging.
 — *S.*, 4353, Cotton bands used in spinning.
Rowland, E., 2379, Steam-boiler furnaces.
Rowlett, W. T., 4062, Knitting machinery.
Bowsall, C. J., 1886, Graphoscopes.
Royer de la Bastie, F. B. A., 2783, Tempering glass.
Royle, J. J., 4237, Discharging condensed steam; valves, [&c.]
Rosié, E., 3212, Preserving metallic pens and pen cases.
Rue, W. W. de la, & Shaw, W. T., 311, Date indicators.
Ruiseco, Count J. de Susini (Clark), 3852, Cigarettes.
Rumpff, C., *Bayer, F.*, *Weskott, F.*, & *Siller, A.*, 2071, [Oxidising anthracene for dyes, &c.]
Rumsey, W. E., & *Davies, J. L.*, 2058, Lubricators.
Rushton, T. H., 1599, Preparing cotton and other fibres.
 — *T. H.*, & *Hutcheson, J.*, 3581, Spinning and [doubling]
Russ, B., 2846, Generating steam and economising heat.
 — *B.*, 2847, Gas.
 — *E.*, 1168, Taps or cocks, &c.
Russell, D., 3544, Railway points.
 — *E. N.*, & *Crawford, T.*, 2611, Telescopic joints.
 — *F. A. R.*, 2895, Domestic fire-grates.
 — *G.*, 3907, Couplings for revolving shafts.
 — *J. S.*, 1962, Generating & applying heat & power.
 — *J. S.*, 4177, Generating & applying heat & power.
 — *W.*, 159, Ayrshire bonnets.
Ruel, W. (Bisien), 4094, Treating sugar cane.
Ruston, J., 611, Feeding thrashing machines.
 — *J.*, 8053, Slide-valves.
Rutherford, W., & *Laird, J.*, 671, Weaving bags, &c.
 — *W.*, & *Laird, J.*, 1804, Weaving bags, &c.
Rutter, G. T., *Hornsby, R.*, *Phillips, J. E.*, & *Innocent, J.*, [4174, Reaping and mowing.
 — *W. F.*, 1495, Combination locks.
Rutulini, C., 959, Opening letters, &c.
Ryder, H., 4456, Furnace grates.
Rydlill, G., 637, Steam-boilers, furnaces, &c.
Ryves, W. H., 8119, Stoppering bottles.

S.

Sack, A. O. (Conradi), 2979 Cutting threads on screws, [&c.]
St. John, J. H., 2004, Recording fares of public vehicles.
Sainty, J., 2937, Dressing corn and seeds.
Saladin, E. (Mewburn), 3344, Collecting and binding [corn, &c.]
Salamon, N. (Lippman & Lind), 795, Sewing machines, &c.
Salmon, J., & *Nickols, D.*, 1755, Cutting card-board, &c.
 — *J.*, & *Wood, R. M.*, 2597, Cutting paper, &c.
 — *J. A.*, 4107, Furnaces.
Salomons, Sir D. L., 584, Indicating speed of shafts.
 — *Sir D. L.*, 910, Fireproof buildings,
 — *Sir D. L.*, 3515, Railway signals.
 — *L.* (Eyssautier & Eyssautier), 2601, Trimming [fabrics].
 — (Membre), 3788, Weaving.
Salomons, L. (Johnson), 4216, Ornamenting fabrics.
Salter, T. F., 1912, Hoeing and cutting out root crops.

Sampson, G. D., 4099, Harness.
Samuel, P. A. (Clark), 3536, Steam and caloric engines.
Samuelson, B., & *Manwaring, W. G.*, 3305, Harvesting [machines].
 — *B.*, & *Manwaring, W. G.*, 3921, Harvesting [machines].
Sandall, J. (Clark), 3677, Link motions.
Sanders, F. (Sanders), 776, Signalling on trains.
 — *R. D.*, 1522, Signals, breaks, &c.; economizing [fuel].
Sanders, R. D. (Sanders), 776, Signalling on trains.
Sanderson, J., *R.*, & *W. A.*, 2161, Steam-boilers.
 — *R.*, *W. A.*, & *J.*, 2161, Steam-boilers.
 — *S.*, & *Proctor, A.*, 600, Fire-places.
 — *W. A.*, *J.*, & *R.*, 2161, Steam-boilers.
Sands, J. I., 1691, Locomotive apparatus for vehicles.
Sandys, R. M., 2644, Boots and shoes.
Sansom, S., & *Farnsworth, S.*, 4096, Casting metals.
Sanson, R. B., 1023, Cutting cloth, &c.
 — *R. B.*, 1418, Ironing or smoothing cloth, &c.
Sarkissian, P., 2165, Sewing-machines.
Sarney, T. S., & *Turner, F. de M.*, 2087, Railways.
Saul, J., & *Hird, H.*, 744, Saving fuel in steam-boilers.
Saulures, A. A. & *Baud, V. P. C.* (Laubarede), 3982, [Beer].
Saunders, E., 3747, Propelling boats.
Sauvée, A. (Déchamp), 1917, Steam-boilers.
 — (Corron), 2982, Dyeing.
Savage, F., & *Goss, J.*, 1209, Hoes.
 — *W. P.*, 1613, Drilling manure and sowing seed.
Savignac, J. E. de, 2279, Vaginal injection canula.
Sawyer, H. (Osgood), 1593, Tables.
 — *J. R.*, 3740, Photographic prints.
Sawyer, W. E. (Clark), 253, Electric telegraphs.
 — (Clark), 3935, Electric telegraphs.
 — (Clark), 4063, Chemical telegraphs.
Saxby, F. E., 4436, Steam-pump condensers.
 — *J.*, 294, Railway points and signals.
Sboril, J. (Wise), 1242, Germinating and drying grain.
 — (Wise), 3208, Germinating and drying grain.
Scaife, J., 176, Packing for piston rods, &c.
 — *R.*, 3602, Extracting essential oils and resinous [matter].
Scampton, T., & *Hands, D.*, 1830, Scotch caps or bonnets.
Scattergood, D., 1342, Looped and lace fabrics.
 — *J.*, & *Wilkes, B.*, 1827, Bolts and spikes.
 — *J.*, & *Wilkes, B.*, 2346, Nuts for screws.
Schäffer, B. A., & *Budenberg, C. F.* (Budenberg), 327, [Injectors].
 — *B. A.*, & *Budenberg, C. F.* (Budenberg), 1709, [Liquid-meters].
 — *B. A.* & *Budenberg, C. F.* (Budenberg), 2631, [Gauges].
Schallehn, H. (Stamer), 1217, Furnaces.
 — (Brühs & Böhringer), 2305, Carriage breaks.
 — (Brühs), 3872, Wire mattresses and seats.
Schanzer, L. I. L., 1929, Drilling and tapping mains.
Schierloh, H. (Abel), 3149, Welding iron or steel.
Schildberg, H., 2677, Writing desks and tables.
Schipmann, H., *Dreyer, J. H. R.*, & *Taylor, W.*, 1575, [Sewing-machines and shuttles].
Schlesinger, A. A., 2215, Lawn-mowers.
 — (Williams), 2340, Lawn-mowers.
 — (Perard), 3049, Frame saws.
Schlick, O. (Newton), 1856, Rudders.
Schloss, J., 2308, Cigarettes.
Schmersahl, A. E., 160, Treating sewage water, &c.
 — *A. E.*, 2439, Purifying sewage.
Schmid, A. (Alexander), 1799, Liquid-meters.
Schmitt, J. (Gottheil), 757, Knitting machines.
Schmittzehe, A., *Klett, F.*, & *Stöffler, A.* (Arnheim), 597, [Presses].

- Schmitz, E. (Dick), 926, Furnace fire-bars.
 — W. (Gedge), 3803, Screw-cutter or stock.
 Schofield, C. J., 3025, Alkali furnaces.
 — S., 1727, Domestic fire-places.
 Scholz, O. J., 1878, Putting capsules on bottles.
 Schoof, W. G., 1249, Lever escapement.
 Schroeder, F., 2831, Locking pins and brooches.
 Schultz, E., 1373, Ordnance.
 Schultz, H. (Whale), 4277, Corset and dress improver.
 — T. (Kayser), 488, Steam and other engines.
 Schüssler, C. F., 4201, Air-gas.
 Schwartz, J. J. (Newton), 4156, Ribbon looms.
 Schwendler, L. (Oesterley), 2235, Duplex telegraphy.
 Scott, G. J., & Browning, T., 2738, Slide-valves.
 — G. L., 1444, Forging and stamping metals.
 — G. L., & Timmis, I. A., 3686, Heating, drying and [cooking].
 — H. Y. D., 653, Treating sewage.
 — H. Y. D., 2450, Treating sewage.
 — H. Y. D., 2568, Phosphate salts.
 — H. Y. D., 3472, Ammonical salts.
 — H. Y. D., 4305, Treating sewage.
 — H. Y. D., & Spence, J. B., 283, Treating sewage.
 — H. Y. D., & Williams, S. de la G., 599, Kilns.
 — Jacob, & Hornsby, R., 3294, Furnaces.
 — James, 2502, Hydraulic lifts for ships.
 — John, & Mirfield, M., 573, Combing fibres.
 Scott, John & W. (Clark), 3170, Washing machines.
 Scott, John P. (Haag), 2758, Motive power engines.
 — L. K., 3964, Sighting ordnance.
 — R., & Trueman, G., 1850, Lace-making.
 — T., 3417, Saving nitre in making sulphuric acid.
 — U., 2290, Railway and other carriages.
 Scott, W. & J. (Clark), 3170, Washing machines.
 Scott, W. M., 712, Fire-arms.
 — W. M., 2052, Fire-arms.
 — W. M., 3424, Fire-arms.
 — W. S., 3076, Separating water from "slip," &c.
 Scott-Moncrieff, W. D., 868, Locomotive carriages.
 — W. D., 1458, Locomotive carriages.
 Seourfield, T., 3563, Door fasteners.
 Seaman, R., & Shepard, H. W. (Lake), 278, Pails, cans, &c.
 Searle, H., 1630, Wrappers for oil-cake, &c.
 — H., & Bacon, J., 3954, Hydraulic pumps.
 Sears, J. (Mills), 2988, Soldering apparatus.
 Sears, J. N. (Chisholm, Bros.), 846, Dressing millstones.
 Seaton, W., 886, Railways.
 — W., 2010, Railways.
 — W., 2829, Railways.
 Secombe, J., & Talling, R., 3048, Packing; paint; [varnish, &c].
 Sedgwick, W. S., 1035, Automatic railway couplings.
 Sée, P. (Mewburn), 1298, Cleaning yarns.
 Seeger, E. von (Wirth), 790, Coffins and ornaments.
 Seimunds, C. H. E., Benary, F. H. & Anthony, T. T. [(Such), 3539, Ships' compasses.
 Selden, J. (Gray & Taylor), 2772, Chains, couplings, &c.
 Sellars, J. C., 1491, Metal founders' blacking.
 — J. C., 4195, Artificial stone.
 Sellers, C. (Johnson), 2459, Cutting screws.
 — G. H. & W. (Johnson), 4476, Rotary puddlers.
 Sellers, W., 288, Sewing-machines.
 — W. & G. H. (Johnson), 4476, Rotary puddlers.
 Sellon, J. S., & Pinkney, R., 4433, Dyeing and printing.
 Selten, I. (Joyce), 1523, Ice-making; motive-power.
 Selwyn, J. H., 1808, Fire-arms.
 — J. H., 3989, Fire-arms.
 Senior, S. A., & Harwood, E. (Desterbecq), 3265, Crimp[ing, &c. fabrics.
 Senior, B., Batley, J., Kelley, G., & Houghton, W., 827, [Spinning].
 Seton, C. C., & Ripley, F., 1748, Spinning and doubling.
 Seton, C. C., & Ripley, F., 3674, Spinning and doubling.
 Sewell, H. T., & Lara, D. de, 3266, Preventing injury to [vessels].
 Sewing-Machine Co., Hamburg-American (Jensen), 3291, [Folding and pressing trimmings, &c].
 Seyd, E., 377, Indicators and governors for machinery.
 Seydeler, G., & Kessel, G., 149, Distance indicators.
 Sézille, A., 3309, Bread-making.
 Shackler, H., & Tasker, H., 2113, Thrashing machines.
 Shackleton, W., Preston, W., & Hoyle, C., 4179, Washing [fibres].
 Shammon, W., & Mohr, C., 2218, Dog muzzles.
 Shanks, F., 838, Locking drags.
 — P. M., & Johnson, J. R., 1517, Printing blocks.
 — W., 4127, Drawing off liquids from casks, &c.
 Shann, G., 3514, Steam-traps.
 Sharer, T., & Betteley, J. H., 2765, Tramway breaks; [cars].
 Sharp, A., 4031, Combined alarm and heating apparatus.
 — T. B., & Muntz, P. A., 667, Condensing fumes.
 Shaw, C. A. (Magoon), 758, Locomotive engines.
 — (Halvorson), 4310, Lamp wicks.
 Shaw, C. A. (Lake), 4077, Repairing spinning rings.
 — (Lake), 4088, Lubricating.
 Shaw, H., Ditchfield, W., & Knowles, J., 1462, Weaving.
 — James, & Johnson, G., 847, Motive-power; econo-[mising fuel].
 — John & Joshua, 155, Hoists.
 — John C., 4272, Tramways.
 — Joshua & John, 155, Hoists.
 — R. H., & Greig, D., 1657, Steam cultivators.
 — W., 3410, Printers' type cases.
 Shaw, W. A. (Murdoch), 2246, Joining & closing pipes.
 Shaw, W. T., & De la Rue, W. W., 311, Date indicators.
 Shawcross, E. H. (Shawcross), 3911, Steam-engines.
 Shawcross, J., 1759, Condensing carding engines.
 — (Shawcross), 3911, Steam-engines.
 Shearer, G., & Ley, W., 2911, Tube-plug or stopper.
 Shears, W., 3759, Centrifugal machines.
 Shedlock, J. J., 558, Apparatus for holding pigments, [inks, &c].
 Sheil, B., 3830, Paving-blocks.
 Sheldon, J., & Stiff, W. C., 2221, Bale-ties or bands.
 Shepard, H. W., & Seaman, R. (Lake), 278, Pails, cans, &c.
 Shepherd, A. & E., 3969, Window sashes.
 — E. & A., 3969, Window sashes.
 Sherman, J. E., 464, Stoves or fire-places.
 Sherwood, P. Mc C. (Clark), 3097, Filling bottles, &c.
 Shippobottom, F., & Battersby, T., 4248, Skewers and [creel frames].
 Shore, E., & Corder, W., 1928, Umbrellas and parasols.
 Shorland, G. L., 3999, Fire-grate backs.
 Short, T., 1171, Purifying sewage.
 Shrewsbury, C. P., 3260, Printing machines.
 Shum, E. G. H., 1901, Paving-composition.
 Shuttleworth, John, 437, Looms for weaving.
 — Joseph, 2263, Steam-engines.
 — Joseph, & Clayton, N., 1142, Portable engines.
 — Joseph, & Clayton, N., 1166, Travelling cranes.
 Sibut, P. M. (Hunt), 867, Iron for horse-shoes, &c.
 Siddall, J., & Gutteridge, F., 243, Oil lamps.
 Siddeley, J., & Mackay, F. N., 3425, Ice-making.
 Sieber, C. A., Glammann, J. H., & Michelssen, C. A. D. W. [(Newton), 2525, Smoke-burning.
 Siebert, O., 622, Gas-regulators.
 Siemens, C. W., 428, Treating puddled balls.
 — (Siemens), 1307, Telegraphic signals.
 — C. W., & Stein, A., 3457, Calcining kilns.
 Siemens, E. W. (Siemens), 1307, Telegraphic signals.
 Signal Light Co., Universal (Clark), 2390, Lanterns.
 Sigourney, J. M., Rosa W. V. V., & Hitchcock, R. (Johnson), [4283, Lamps; spring movements.

- Silas, F., 1218, Life-buoy and self-lighting signal.
 Silber, A. M., 2968, Lighting and heating.
 Siller, A., Bayer, F., Weskott, F., & Rumpff, C. 2071,
 [Oxidising anthracene for dyes, &c.
 Silliman, B. (Johnson), 2520, Separating ammonia.
 Silver, H. A., 2938, Fire-arms.
 Silver, W. J., & Atwood, G. (Newton), 873, Pumps.
 Silvester, H. R., 3236, Water-dressing for medical purposes.
 Simis, T. (Achenbach), 3849, Socks or inner soles.
 Simmons, J., 3132, Balloons.
 Simon, M. (Barthel), 3951, Boot-cleaning machine.
 Simonds, G. F., & Ferson, J. A., 2099, Tempering.
 Simonds, G. F., & Ferson, J. A. (Morgan-Brown), 1282,
 [Tempering.
 ——— G. F., & Ferson, J. A. (Jensen), 4332, Tempering
 [steel articles.
 Simons, W., & Brown, A., 2038, Dredgers.
 ——— W., Brown, A., & Barns, J. W., 3789, Dredgers.
 Simpson, B. C., 3767, Spring break for carriages.
 Simpson, F. H. (Simpson), 4134, Springs.
 ——— (Simpson), 4145, Rotary motion.
 Simpson, James, & Fawcett, S. T., 3270, Perambulators.
 ——— Joseph, & Smyth, S. R., 3840, Iron and steel.
 ——— Joseph, & Smyth, S. R., 3881, Blast furnaces.
 ——— Joseph, & Smyth, S. R., 3895, Iron; furnaces
 [and puddler.
 ——— M. H. (Simpson), 4134, Springs.
 ——— (Simpson), 4145, Rotary motion.
 ——— T., 1067, Kitcheners.
 ——— W., & Buckland, E. A. J., 1379, Iron ships.
 Sinclair, T. R. (Newton), 205, Filtering liquids, &c.
 Singer, I. M., 698, Sewing-machines.
 ——— I. M., 2012, Harness for horses.
 Singer Manufacturing Co. (Newton), 3983, Sewing-ma-
 chines.
 Sirtaine, G., 3120, Cleansing wools from grease, &c.
 Sival, D., frères (Smith), 1576, Lace.
 Sival, F., 190, Lace making.
 ——— F., 218, Ornamental fabrics.
 Skene & Devallée (Whitehead), 2796, Gill-boxes.
 Skerratt, W., & Makin, S., 453, Spinning.
 Skidmore, W. H. (Jensen), 1062, Buffers and couplings.
 Skinner, R., 3217, Asphaltum mastic.
 ——— T., 1570, Etching on metals.
 Sladdin, J. (Lake), 719, Loom harness.
 Slade, H. H. & W. A., 4360, Telegraph poles & insulators.
 ——— W. A. & H. H., 4360, Telegraph poles & insulators.
 Slater, C., & Dawson, D., 633, Dyeing.
 ——— J., 3714, Casks.
 ——— T., 2625, Electro-magnets.
 Sleath, R. (Lauth), 549, Metal rolls, pipes, wheels, &c.
 Smale, J., & Conisbee, W., 739, Printing machines.
 Small, J. H., 2211, Punching, &c. tram-car tickets.
 ——— J. H., 2430, Punching, &c. tickets.
 ——— J. H., 2745, Carriage wheels.
 ——— J. H., 4159, Brushing, combing & clipping horses.
 ——— J. H., & Cox, T. H., 2139, Ticket binder.
 Smalley, W., & Heyworth, E., 375, Steam-boilers.
 Smart, T. W., & Kinney, I. (Lake), 1895, Cutting
 [scrolls, &c.
 Smeaton, J. G., 1985, Supplying water to buildings.
 ——— W., & Tylor, W. H., 1028, Lavatories, baths, &c.
 Smethurst, A., 2715, Advertising.
 Smily, S., 4202, Stamping designs on metals; dies.
 Smith, Alfred, & Hannam, G. W., 562, Preparing peat.
 ——— Alfred, & Melville, D., 1314, Treating wool, &c. for
 [size.
 ——— Alfred, & Wilson, G., 3365, Railway passes.
 ——— Arthur, 1002, Purifying water.
 Smith, B. (Haseltine), 1219, "Butterine."
 Smith, C., & Alexander, A., 1118, Steam-boilers.
 ——— C. T., & S. M., 1756, Dyeing or printing fabrics.
 Smith, D., Henderson, T., & Thompson, W. P., 569,
 [Supplying fuel to furnaces.
 ——— Edmund, 2981, Coilers of drawing frames.
 ——— Edward, 1386, Hearth rugs.
 ——— Edward, 3529, Looms.
 ——— Edward, & Clarke, T., 4448, Treating ores,
 [minerals, &c.
 ——— Edwin, 4447, Cinder sifters.
 ——— F. C., 386, Cutting woollen fabrics.
 ——— F. H., 211, Adhesive plaster.
 ——— F. H., 3473, Oil lamps.
 ——— F. H., & Tandy, G. G., 4286, Lamps.
 ——— George, 224, Bichromate of potash.
 ——— George, 345, Artificial apollinaris water.
 ——— George, 1092, Consuming smoke in furnaces.
 Smith, George (Davies), 1883, Hydraulic presses.
 Smith, George E., 3222, Galvanic batteries.
 ——— George Hand, & Paterson, H. C., 4194, Treating
 [hydrocarbons.
 ——— George Henry, 2720, Applying awnings to eaves,
 [boats, &c.
 ——— George Henry (Perkins & Stowe), 592, Clearing
 [snow from tramways, &c.
 ——— George Henry (Proctor), 3151, Driving sewing-
 [machinery.
 ——— H., 452, Raising and lowering window blinds, &c.
 ——— H., 3965, Organs and other instruments.
 ——— H. C., 806, Artificial ice.
 Smith, H. J. (Bousfield), 380, Electrical machines.
 Smith, H. L., 1849, Guiding, driving, &c. vehicles.
 ——— H. L., 3973, Rails and wheel tyres.
 ——— H. L., 4113, Railway crossings.
 ——— James, 883, Stoves and ranges.
 ——— James, 2148, Mechanical stokers.
 ——— James, & Chamberlain, A., 1551, Pattern plates.
 ——— James, & Vicars, T. & T., 669, Steam-boilers and
 [furnaces.
 ——— James, & Vicars, T. & T., 1793, Steam generators &
 [furnaces.
 ——— James H., 250, Sewing-machines.
 ——— James H., 2511, Sewing-machines.
 ——— James S., Chew, W., & Sutcliffe, J. S., 3898, Looms.
 ——— John, 1322, Looms.
 ——— John, 2748, Beetling machines.
 ——— John, 2970, Looms.
 ——— John, 4070, Looms.
 ——— John, 4187, Loom shuttles.
 ——— John, 4207, Spinning and doubling.
 ——— John, & Dowler, T. W., 2688, Jewellery and dress
 [fastenings.
 ——— John, & Jackson, A. & G., 707, Looms.
 ——— John, & Robinson, J., 656, Shaping wood.
 ——— John, & Robinson, J., 3913, Sawing wood.
 ——— John, & W., 1188, Breaking stones, &c.
 ——— John H., & Hartley, O. H., 188, Self-acting mules.
 ——— John Mc I. (Audouit), 297, Medicinal plasters.
 ——— John Y., 2950, Railway breaks.
 Smith, Joseph N. (Hughes), 750, Railway journal-boxes.
 Smith, M. H., 1394, Preserving alimentary substances.
 ——— Richard, Stephenson, W., & Vere, J., 193, Capstans.
 ——— Robert, 3354, Doubling and winding yarns.
 ——— Robert, 4385, Spooling yarns or threads.
 ——— Robert, & Brown-Westhead, M., 2610, Venetian
 [blinds.
 ——— S., & Bywater, W., 646, Spinning, &c. fibres.
 ——— S., & Emsley, S., 4069, Spinning and twisting.
 ——— S. H., 1809, Marking or scoring whist; card
 [tables.
 ——— S. M. & C. T., 1756, Dyeing or printing fabrics.
 ——— T. J. (Sival, Frères), 1576, Lace.
 ——— (Abercrombie), 4485, Inking papers, &c.
 ——— (Poron & Poron), 2774, Weaving.

- Smith, Wade H., 2815, Metals and alloys; gas-making.
 — Wade H., & Kirkwood, J. T., 609, Carbonising [metals].
 — Wade H., & Kirkwood, J. T., 610, Treating metals.
 Smith, Walter (Campbell), 4155, Compound drawing [implement].
 — (Campbell), 4204, Drawing compass.
 Smith, William (Smith), 3191, Rotary engines.
 Smith, William (Smith), 3191, Rotary engines.
 Smith, William, Hunter, W., & Pinkerton, A., 908, Weaving.
 — William & J., 1188, Breaking stones, &c.
 — William, & Pieri, P., 4073, Projectiles; mounting [ordnance].
 — William, & Whittaker, J., 2105, Railways; wedges.
 Smith, William H., Merrell, H., & Dean, S. (Haseltine), [2001, Millstones].
 Smith, William N., 3721, Composing type.
 — William W., 4281, Anchors.
 Smyth, D. Mc C., 1633, Sewing-machines.
 — S. R., & Radeke, W., 1355, Peat-fuel; carbonizing.
 — S. R., & Simpson, J., 3840, Iron and steel.
 — S. R., & Simpson, J., 3881, Blast-furnaces.
 — S. R., & Simpson, J., 3895, Iron; furnaces and [puddler].
 Snell, H. S., 379, Stoves.
 Snelus, G. J., 3780, Treating solutions containing metals, &c.
 Snow, H. F. (Greely), 2834, Braces and suspenders.
 Snowden, S. W., 1922, Safety-valves.
 Société Anonyme de la Papeterie de Thode (Johnson), [3708, Paper pulp].
 Somerset, J., & Hayes, I. R., 2204, Umbrellas; parasols.
 Somerville, G., & Crombie, G., 365, Cutting paper, &c.
 — J., 733, Gas.
 — W. C., & Campbell, J., 538, Mortar mills.
 Sommer, F. (Johnson), 1089, Steam-boiler scrapers.
 Soper, W., 3057, Fire-arms.
 Sorieul, A. F. (Gedge), 3077, Bellows and blast engines.
 Souehard, S. H., 773, Lamps.
 Soul, M. A. (Hartog & Co.), 2037, Steam-engines.
 — (Brust), 3885, Coats.
 Soulages, L., & Cahuc, R. (Gray), 3934, Blasting.
 Sourzac, L. G. (Courbier & Villalard), 3092, Driving bands.
 Southall, C. H., 1514, Finishing boots and shoes.
 Southan, W. H., & Chandler, C., 2703, Surgical plasters, &c.
 Southby, E. R., 1361, Treating beer.
 Southwell, W. A., Briggs, T. J., & Willoughby, S. & J., [839, Tar].
 — W. A., Briggs, T. J., & Willoughby, S. & J., [1126, Evaporating pans].
 Southwood, W., 3565, Fitting masts and spars.
 Souza, M. A. de, 3698, Counting apparatus.
 — M. A. de, 3700, Cutting tobacco.
 — M. A. de, 3702, Bread-making.
 Sowden, D., & Stephenson, R. C., 863, Looms.
 Sowerby, J., 4065, Presses for moulding glass.
 Sparkes, A. L., & Marsh, C., 1147, Indicating temperature.
 Spartali, N. D., 513, Fire-places and cooking stoves.
 — N. D., 1500, Motive-power.
 — N. D., 2367, Boilers and furnaces.
 — N. D., 2900, Propellers.
 Speir, R., & Mather, J., 4386, Condensing vapours, &c.
 Spence, J. B., & Scott, H. Y. D., 283, Treating sewage.
 — R., 2314, Locking switches and signals.
 — W. (Willson), 2394, Railway couplings.
 — (Forgeois & Claye), 2461, Treating sewage.
 — (Corey), 4481, Hats.
 Spencer, E. S., 2237, Horse-hoes.
 — G., & Gatwood, E., 1220, Cases for buffer-springs.
 — J. F., & Inglis, W., 1413, Starting steam-engines.
 — J. F., & Inglis, W., 2529, Steam-engines.
 Spencer, R. S. (Parkman), 3594, Umbrellas & sunshades.
 Spice, R. P., 3269, Gas.
 Spice, R. P., 4365, Gas.
 Spiers, G., 3915, Adapting thread for sewing.
 Spill, D., 1586, Propelling tram-cars, boats, &c.
 Spiller, A. F., 2574, Roller skate.
 Spinks, C., & Greig, J., 2549, Grinding grain, &c.
 — C., & Greig, J., 4147, Grinding grain, &c.
 Spittle, W. F., & West, W., 359, Solitaires; sleeve links.
 Spong, J. O., 1646, Removing dirt from boots and shoes.
 Squire, E., & McComb, J., 3646, Revolving cutters.
 Stableford, W., 3643, Railway couplings.
 Stacey, J. T., & Lace, A., 1958, Carburising air.
 Stacy, G., 282, Hammers.
 Stafford, W. C., Taylor, T., & Stott, E., 4279, Oiling spindles.
 Stahlschmidt, J. C. L. (Braun), 4011, Coloring, &c. [photographs].
 Staker, C., 3929, Releasing horses from vehicles.
 Stamer, H. G. (Schallehn), 1217, Furnaces.
 Standen, B. B., 3122, Treating human excrement, &c.
 Standfield, J., & Clark, J. L., 111, Docks and pontoons.
 — J., & Clark, J. L., 202, Docks and pontoons.
 — J., & Clark, J. L., 4257, Towing vessels.
 Stanford, N., & Bott, G., 2153, Rolling iron and steel wire.
 Stanhope, Hon. W. E. C., 1940, Skates.
 Staniar, T., 1859, Dressing meal, pollard, &c.
 Staniforth, W., 1274, Cutlery.
 Stanley, J. M., 1729, Metallurgical furnaces.
 — J. M., & James, H., 1452, Milking cows.
 — W. F., 411, Circular saw bench.
 — W. F., 412, Mathematical drawing instruments.
 Stanton, S., & Warner, S., 775, Invalid bedsteads.
 Stanwix, H., 1419, Mortising machines.
 Starley, J., 3959, Velocipedes, &c.
 Stayner, A. E., & Hardy, C. A., 2877, Attaching handles [to picks].
 Stead, S., 1598, Preventing corrosion of metals.
 Stearns, J. B., & Upham, J. C., 256, Electric telegraphs.
 — Z. B. (Gauchot), 2819, Match-boxes.
 Steed, A. G., & Baker, T. H., 4416, Preserving substances; [protecting explosives].
 Steedman, J., 1663, Purifying carbon oils, &c.
 Steegmann, E. B., & R. H., 3668, Lace fabrics.
 — R. H., & E. B., 3668, Lace fabrics.
 Steel, J., & McInnes, J., 74, Railway breaks and signals.
 — J., & Wilson, H., 2397, Cooling & heating liquids.
 Steers, R., & Druce, G. F., 1537, Screws; screw drivers.
 — R., & Druce, G. F., 1653, Horse-shoes.
 Steffen, C., & Fröhlich, A., 1341, Steam-boilers.
 Stein, A., & Siemens, C. W., 3457, Calcining kilns.
 Steinbach, F. Chomé, 1290, Paving-stone.
 — F. Chomé, 3520, Paving-stone.
 Steinheil, A. & E. (Wirth), 1124, Photographic instru- [ments].
 — E. & A. (Wirth), 1124, Photographic instru- [ments].
 Steinway, A. (Bonneville), 4015, Pianoforte attachments.
 Stella, M. (Gallico), 1404, Extracting and refining copper.
 Stenger, A., & Walther, A. (Wirth), 3524, Preparing malt.
 Stenhouse, J., 652, Purifying saccharine solutions.
 Stephens, C. B. & De L. H. (Johnson), 1758, Toy pistols.
 — De L. H. & C. B. (Johnson), 1758, Toy pistols.
 Stephens, J., 2744, Shooting rockets, harpoons, &c.
 — J. F., 369, Shirt-fronts.
 — R., & Broughton, F., 1198, Steam-break.
 — R., & Brooks, R., 2513, Railway points, &c.
 — W. H., 947, Cattle food.
 Stephenson, J., & Pickup, J., 1204, Furnaces and fire-bars.
 — R. C., & Sowden, D., 863, Looms.
 — W., Vere, J., & Smith, R., 193, Capstans.
 Sterne, L., 723, Railway couplings.
 — L., 1965, Buckles.
 — L., 3974, Telegraph insulators.
 — L., & Horack, C. L., 4242, Railway couplings.

- Sterne, L. (*Vose*), 4394, Springs.
 Steven, W., 748, Brick-making.
 Stevens, B. F. (*Reid*), 837, Bolts and nuts.
 ——— (*Redfield*), 980, Castors.
 ——— (*Reid*), 1014, Lifting and hauling casks.
 ——— (*Laubereau*), 2364, Motive-power engines.
 ——— E., 371, Breaks for vehicles and machinery.
 ——— J. J. F., 1125, Railway points and signals.
 ——— T. T., & Woods, A., 3035, Saving life at sea.
 ——— W., 429, Boots and shoes.
 ——— W., 4314, Reciprocating presses.
 Stevens, W. X. (Newton), 418, Shears for cutting metal.
 Stevenson, C., 1469, Evaporating or recovering furnaces.
 ——— G., & Reid, J., 3939, Hauling or winding.
 ——— H. R., & Hart, G. W., 4483, Fuel.
 ——— G. W., & Chandler, S., 3252, Gas.
 ——— W., 4220, Lattice and trellis work.
 ——— W., 4268, Lubricating window pulleys.
 Steward, J. A., 845, Railway points.
 Stewart, A., 4173, Illuminating for surgical operations.
 ——— D., 192, Chain clips for cloth-stretching, &c.
 ——— C., 4401, Attaching heels to boots.
 Stewart, O. (Hood), 3516, Exhaust apparatus for engines.
 Stewart, R. W., 3688, Shaking yarns.
 Stichebury, F., 3454, Heating box-irons.
 Stiff, W. C., & Sheldon, J., 2221, Bale-ties or bands.
 Stingl, J., & Béranger, J. A. (Paget), 3613, Purifying [waters].
 Stirling, J., & Peacock, T., 3419, Consuming products of [combustion].
 Stocker, A. S., & Edwards, G., 3461, Bottles and stoppers.
 Stockman, B. P., & Bennett, J., 1077, Lamps and prisms.
 Stockwell, H. B., Merrill, J. W., & Megill, E. L. (New-
 [ton]), 3782, Lighting gas; fulminating compounds.
 ——— J. W. (Butler), 1482, Moulding concrete pipes.
 ——— (Butler), 2872, Moulding pipes; drilling rocks.
 Stöffler, A., Schmitzke, A., & Klett, F. (Arnheim) 597,
 [Presses].
 Stoker, A. W., & Heaton, J., 2603, Casting steel.
 Stokes, A. & F. J., 2668, Nails, bolts, &c.
 ——— F. J. & A., 2668, Nails, bolts, &c.
 ——— R., & Lyman, H. A., 2740, Bunks for staves.
 Stone, E. (*Switzer*), 3860, Looms.
 ——— J., 1545, Wrought iron and furnaces.
 ——— J., 2615, Cooking stoves.
 ——— J., 3755, Metal furnaces.
 ——— J., 3801, Coating steam-boilers.
 Stone, J. B. (Newton), 94, Electro-magnets.
 Stone, R., 714, Treating iron.
 ——— R., 787, Pulleys or drums.
 ——— R., 3356, Metals.
 ——— R., 4298, Smelting metals.
 ——— W. D., 4183, Preparing food.
 Stoney, F. G. M., 882, Gates and sluices.
 ——— F. G. M., 3103, Sluices or flood gates.
 Storer, W., 1022, Washing, wringing and mangling.
 ——— W., 2527, Treating skins, hides, &c.
 Storey, J., & Murdock, W. M., 2616, Steel.
 Stott, E., Stafford, W. C., & Taylor, T., 4279, Oiling
 [spindles].
 ——— J., & Barker, J., 2766, Drying fabrics.
 Stotz, A., & Holder, P. (Bossert), 2024, Shearing sheep.
 Stow, N. (Bousfield), 2696, Dental engines.
 Stowe, J. L., & Perkins, C. H. (Smith), 592, Clearing
 [snow from tramways, &c].
 Strachan, J., 260, Bank cheques, &c.
 Straker, W. C., 1744, Bookbinding.
 Strang, W., 3651, Weaving.
 Straten, E. van der, 2526, Heating and lighting.
 Strathern, A. M., & Craig, J. & A. F., 3494, Motive-power.
 Strauss, A., 3362, Tobacco pipes.
 ——— L., & Davis, J. W., 2560, Fastening pockets.
 Streeter, W. M., & Nash, C., 4296, Lacing boots and shoes.
 Strong, W., & Beck, W., 424, Bricks.
 Stroudley, W., & Banister, F. D., 4311, Railway signals.
 Strugnell, A., 2820, Hot-water apparatus.
 Strupp, J., & Bowyer, E., 4019, "Wiring" hat and
 [bonnet shapes].
 Stuart, A. P. (Stuart), 1670, Gasaliers and globes.
 Stuart, J., 1276, Utilising tin-plate scraps, &c.
 ——— J. M. (Stuart), 1670, Gasaliers and globes.
 ——— M., 3998, Feeding-bottles.
 Stuart, S. (Tongue), 4223, Couplings for shafts, rods, &c.
 Stubbs, J., & Corrigan, J., 4061, Winding yarns.
 ——— R. G., 2910, Venetian and roller blinds.
 Stumpf, G. (Gottheil), 1308, Measuring water-supply.
 Sturgeon, T., & White, W. G., 2085, Rock-drills.
 ——— T., & Walker, W., 2969, Condensing steam.
 Styles, A., 2085, Trollies or tipping wagons.
 Styles, J., Barney, G. A., Valentine, P., & Fox, A. D.
 [(Clark), 2041, Springs].
 Suarés, S. L., Fonsèque, D. F., & Cordes, B. (*Esprir*) 510,
 [Cutting down trees].
 Such, H. J. (Benary, Anthony, & Seimunda), 3539, Ships'
 [compasses].
 Sudlow, W. E., 2962, Rotary engines.
 Suffield, T., 1256, Pumps for acids, &c.
 Sugden, T., Bradbury, G. F., & Chadwick, T., 1833,
 [Sewing-machines].
 ——— Z., & Hartley, J., 871, Warming buildings.
 Sugg, W. T., 1584, Regulating supply of gas.
 ——— W. T., 4227, Gas-burners and fittings.
 Summerford, J. S., 335, Reclining chairs.
 Summers, J., 3630, Nails or spikes.
 Summerscales, J., W., & S., 3848, Chaff-cutters.
 ——— S., J., & W., 3848, Chaff-cutters.
 ——— W., S., & J., 3848, Chaff-cutters.
 Sumner, W., & Watson, D., 1120, Tubes for boilers, &c.
 ——— W., & Waldenström, E. H., 3812, Copper singe
 [plates].
 Susini-Ruiseco, Count, J. de (Clark), 3852, Cigarettes.
 Sutcliffe, J. S., Smith, J. S., & Chew, W., 3898, Looms.
 ——— R., 828, Cleaning steam-boiler flues.
 ——— T., 3972, Aërated liquid bottles.
 Sutherland, W., 31, Ornamenting glass.
 ——— W. S., 1784, Producing heat; welding metals.
 Sutherland-Leveson-Gower, G. G. W. (Duke of Suther-
 [land]), 319, Steam cultivators.
 Sutton, S. G., & Chapman, A., 1281, Sewing-machines.
 ——— S. H., 3706, Fastenings for wearing apparel.
 Swainson, G. F., & Dover, G., 3184, Horse-shoes.
 Swale, S., 340, Preserving life at sea.
 Swan, J. S., & Connell, J. H. (Lake), 1243, Water-meters.
 Sweeney, O., 1624, Burning petroleum, &c.
 Swinburn, J., & Huntriss, G., 2790, Tunnelling; cutting
 [coal].
 Swingle, A., Huntington, F. A., & Miller, W. J., 1141,
 [Fire-arms].
 Switzer, J. J. (Stone), 3860, Looms.
 Swyndregt, M. W. M. van, 3816, Shirt-fronts.
 ——— M. W. M. van, 4012, Buttons, studs, &c.
 Sykes, B., & Bruce, W., 1318, Bottling & preserving beer.
 ——— E., 2779, Stoves.
 ——— J., Bateman, T. S., & Mellard, J., 145, Rolling metals.
 ——— R., & Mortimer, L., 888, Wadding for clothing.
 Symes, E., 2406, Trousers.
 Synge, M. H., 254, Deodorising fluids; trapping sinks, &c.
 ——— M. H., 255, Filtering and purifying drainage.
 Szalay, L. (Jonas), 3623, Fire-arms.

T.

- Tabutiaux, A. P. E., & Welle, P. L.* (Henderson), 2164,
[Winding weft; shuttles.]
- Tackels, C. J., 2220, Gas burners.
- Taffinder, J., Wilson, M., & Hall, D., 3971, Working
[saw frames.]
- Taft, O. W. (Clark), 780, Knife sharpeners, &c.
— (Clark), 2271, Sharpening table knives.
- Talbot, F. J., 3023, Combined buffer and coupling.
— G. O., 3647, Safe locks.
- Talcott, C. McK. (Post), 148, Screws.
- Tallerman, D., & Clarke, W., 4340, Nutritive drinks.
- Talling, R., & Seccombe, J., 3048, Packing; paint; var-
[nish; &c.]
- Tandy, G. G., 874, Lamps.
— G. G., & Dryden, J. A., 347, Lamps.
— G. G., & Dryden, J. A., 1952, Lamps.
— G. G., & Smith, F. H., 4286, Lamps.
- Tangye, J., 967, Raising heavy bodies.
- Tanner, B., 1915, Treating phosphates of lime.
- Taplay, H., 3500, Chandeliers, gaseliers, &c.
- Tapp, C., 833, Bottling liquids.
- Tappan, B. (Clark), 2579, Miners' safety lamps.
— L. (Rennick), 1396, Artificial butter.
- Tarbutt, P. F., 1829, Advertising.
- Tardani, G. (Newton), 1614, Soap.
- Tarr, J. B. (Haseltine), 4233, Casting metals.
- Tasker, H., & Shackler, H., 2113, Thrashing machines.
— S. P. M., 2203, Furnaces.
- Tatham, J., 2392, Feeding carding engines.
- Tattersall, F., & Easton, W., 248, Moulding bricks, &c.
- Tavernier, L. F., 466, Felts and felted fabrics.
- Tay, N. (Lake), 2075, Spikes.
- Taylor, D. & W., 2949, Looms.
— Edward, 2393, Washing, wringing, &c. machines.
— Edward, & Ellis, W., 3654, Umbrella furniture.
— Edward H., & J. W., 1407, Fastening doors of
[trucks, &c.]
— Edward J., Milsted, A., & Clark, E., 1331, Fire-
[proof buildings, &c.]
— Ephraim, 357, Washing machines.
— F. B., & Gray, R. (Selden), 2772, Chains, coupl-
[ings, &c.]
— G., 4488, Coffin shovels.
— G., & Farley, R., 3760, Casting chilled rolls.
— H. E., 889, Cleaning small coal; separating ores.
— James, 3588, Cranes and hoists.
— James W. & E. H., 1407, Fastening doors of
[trucks, &c.]
— John, 1333, Treating flock patterned papers.
— John, 1412, Heating feed-water.
— John, 1960, Indicating rotations of revolving
[shafts.]
— John, & Nuttall, J., 1117, Railway chairs.
— John E. H., 751, Fireproof buildings.
— Joseph & J. S., & Challen, S. W., 3864, Screw nuts.
— Joseph S. & J., & Challen, S. W., 3864, Screw nuts.
— Rees, 2411, Tin plate.
— Richard S., 2447, Fixing taps in barrels, &c.
— Robert & Clegg, J., 555, Mules and twiners.
— Robert, H., 2626, Heating air.
— Thomas, 198, Grinding or surfacing metal.
— Timothy, Stott, E., & Stafford, W. C., 4279, Oil-
[ing spindles.]
— W. & D., 2949, Looms.
— W., & Dreyer, J. H. R., & Schipmann, H.,
[1575, Sewing-machines and shuttles.]
— W. H., 4384, Dress improvers.
- Taylorson, T., & McMyn, J. K., 2689, Mules for spinning.
- Teal, J. H. (Mills), 4035, Motors and pumps.
- Teale, W. E., 195, Lamps.
— W. E., 2914, Mining lamps.
- Tellier, A. le (Wise), 2496, Purifying and filtering
[water.]
— C. (Dufrené), 2770, Preserving substances.
- Templar, B., 1434, Tidal power machines.
- Tenwick, J., 4240, Reaping and mowing machines.
- Terbecq, V. F. L., Count H. de (Vaughan), 1644, Phos-
[phates of lime.]
— V. F. L., Count H. de (Vaughan), 2168,
[Phosphates of lime.]
- Terrace, J. B., 630, Working steam-engine valves.
- Terrell, R. (Lake), 4344, Bale bands or ties.
- Terrell, T., 2794, Castors.
- Terrey, C. A., 563, Setting diamonds in cutting tools.
- Tesorieri, D. A. (Newton), 2569, Gas-burners.
- Testud de Beauregard, F. A., 1069, Packing.
- Tetlow, H., & Booth, E., 2310, Shuttles.
- Teulon, G. A., 706, Rotary engines.
— G. A., 939, Cylinder engines and pumps.
- Teyssonneau, E. (Johnson), 760, Tins for food, &c.
- Thairllwall, C. W., 3624, Brick-making.
- Thode, La Société Anonyme de la Papeterie de (Johnson),
[3708, Paper-pulp.]
- Thom, A., & Burch, W., 3526, Saddles.
— J., 4236, Ageing printed fabrics.
- Thomas, A., & Caffall, R. M., 467, Sealing gas mains, &c.
— A. E., 854, Kaleidoscopes.
— C. W. W., 1211, Gas-making.
— E. G. P. (Girard), 2347, Blue-coloring matter.
— J., Hopkins, T., & Rees, J., 769, Tin and terne
[plates.]
— J., & Lawden, T. T., 3548, Fire-arms.
— J., Morris, E. S., & Abel, F. E., 4222, Cleaning
[tin plates, &c.]
— J., & Nicholson, B., 4443, Ships' anchors.
— W., 3206, Barred fabrics.
— W., 3286, Weaving.
— W., 3335, Umbrella fabrics.
— W. F., 3262, Sewing-machines.
- Thomas-Anquetil, A. T., & Grenet, A. (Clark), 2210,
[Fire-arms.]
- Thompson, C. A. (Lake), 2719, Umbrellas,
— H. G. (Tongue), 1000, Book sewing-machine.
— (Tongue), 2489, Boots and shoes.
- Thompson, J. B., 3033, Coating steel and iron.
— J. G., & Webster, J. J., 593, Cleaning tram-
[way tracks.]
- Thompson, J. J. (Haseltine), 2108, Sewing-machines.
- Thompson, N., 276, Stoppers for bottles, jars, &c.
— N., 561, Stoppers for bottles, jars, &c.
— N., 1336, Connecting pipes or tubes.
— N., 2961, Stopping bottles, jars, &c.
— N., 3824, Bottle and jar stoppers.
— T., Peile, S., & Haughton, J., 1303, Rakes.
— T. H., 3284, Marine governors.
— W., 275, Cutting, &c. marble and stone.
— W., 3986, Treating fibres for hair-pads, &c.
— W. H., 3368, Cutting stone, wood, &c.
— W. H., 4024, Extinguishing fire.
— W. H., & Kimberley, N. G., 4201, Steering
[indicators.]
— W. P., 1103, Furnaces.
— W. P., Smith, D., & Henderson, T., 569,
[Supplying fuel to furnaces.]
- Thomson, B. L., 2044, Protecting inner surfaces of ships.
— David, 3397, Boring rock.
— Denzil, 3107, Making pills.
— G., & Watson, G., 2913, Compound india-rub-
[ber sheets.]

- Thomson, G. F., & Jones, E., 3857, Water tuyeres.
 — H., 3561, Thinning turnips.
 — T., 2251, Imitation leather.
 — T., 4029, Leather-cloth, floor-cloth, &c.
 — W., 1430, Tube expanders.
 Thornton, F. W., 4367, Railway fog-signals.
 — John & W. D., 1596, Dyeing fibres and [fabrics].
 — Joshua, 801, Carding fibres.
 — Richard, 577, Cutting corks.
 — Robert, 3562, Wire-card covering.
 — T., 2608, Closing doors and gates.
 — W. D. & J., 1596, Dyeing fibres and fabrics.
 Thornycroft, J. L., 382, Vessels and propellers.
 Thorp, J. H. (Lake), 1264, Coal oil stoves.
 — (Johnson), 2100, Cooking, lighting, &c.
 Thorpe, A. C., & Young, A. W., 1699, Breast pin stems.
 — C., & Wolstenholme, J., 4212, Steam-pumps.
 — J., & Hunstone, W. H., 3429, Waterproof fabrics.
 Thoun, F. (Wiles), 2507, Motors.
 Threlfall, L., 1357, Self-acting door closer.
 — R. A., Hamer, W., & Bond, J., 80, Polishing [spinning rollers, &c].
 Throop, G. E. (Throop), 8121, Cleaning grain and seeds.
 Throop, J. W. (Throop), 3121, Cleaning grain and seeds.
 Thuillard, A., 987, Horse-shoes.
 Thursfield, W. N., 4350, Enabling the blind to write.
 Thurston, R. H. (Haseltine), 96, Testing wood, iron, &c.
 — (Haseltine), 2741, Forging, drilling, &c.
 Thwaites, W. C., 483, Safety receptacle for watches, &c.
 Thys, J. F., 1384, Cleansing, painting, whitewashing, and [coating walls, &c].
 Tibbitts, F. G., & Weaver, G. E. (Lake), 2368, Rolling [metals].
 Tice, W., 3690, Warming carriages, vessels, &c.
 Tiffany & Co. (Clark), 4034, Handles of teapots.
 — (Mills), 4076, Escapements.
 — E. (Churchill), 4309, Knitting-machines.
 Tiffany, S. S. (Meech), 2956, Paper-pulp.
 Tijou, W., 1987, Safety and equilibrium valves.
 Tilley, J., 3809, Scotch bonnets and fancy hosiery.
 Tillman, S. D., 334, Determining musical intervals, &c.
 Timmins, H., 3800, Joining wires.
 Timmis, I. A., & Scott, G. L., 3686, Heating, drying and [cooking].
 Tindell, N. L., 4429, Pipes and tubes for smoking.
 Tinker, J., 1363, Weaving shuttles.
 — W. (Munnick), 2633, Testing milk, pigments, &c.
 Tipping, I., 2078, Lift pumps.
 Titley, W., 2174, Locks and latches.
 Tobin, T. W. (Lynn), 3228, Producing optical illusions.
 Todd, A. & Wright, E., 3968, Revolving shutters.
 Todd, H. L. & Burling, J., 3818, Trimming wall papers.
 Todd, L. J., 225, Tramway locomotives and boilers.
 — L. J., 1533, Tramway locomotives and cars.
 Todd, P. T., & Works, A. J. (Haseltine), 3682, Rotary [engines].
 — W. (Page), 1853, Car couplings.
 Tomkins, A. S., 2504, Cooking stoves.
 Tommasi, F., 2896, Hydro-thermic press.
 — F., 2897, Hydro-thermic motive-power engine.
 — F., 2907, Hydro-thermic rivetting machine.
 — F., 2908, Hydro-thermic punching machine.
 — F., 3031, Tram-car traction engine.
 — F., 3476, Hydro-thermic tramway vehicle.
 Tompkins, R., & Blake, G., 3167, Boat-lowering apparatus.
 — R., & Blake, G., 3169, Steadying and steering [ships, boats and other vessels].
 Tongue, J. G. (Dankohler), 505, Preserving meat.
 — (Thompson), 1000, Book sewing-machines.
 — (Curtis & Gilman), 1299, Harness lining.
 — (Bang), 1451, Dyeing fabrics.
 Tongue (Chamberlain & Mandelbaum), 1525, Trans- [mitting motion on railways].
 — (Gaffard), 1839, Indelible ink.
 — (Butler), 1926, Stench traps.
 — (Thompson), 2489, Boots and shoes.
 — (Besson), 2753, Musical instruments.
 — (Betting), 3540, Copying presses.
 — (Gorges), 3946, Preserving substances.
 — (Mallat), 4006, Inkstands.
 — (Stewart), 4223, Couplings for shafts, rods, &c.
 — (Devries), 4361, Splints or clamps for repairing [shafts, &c].
 Toole, T. J. O' (Lake), 915, Propelling boats and carriages.
 Tooley, A. W., 2212, Sack-lifting apparatus.
 — A. W., 3450, Holding sacks for filling.
 — A. W., 3631, Lifting, tilling & emptying sacks.
 Toon, J., Donisthorpe, A. R. & G. E., & White, G., 171, [Woollen yarns].
 Topham, A., J. & F., 2620, Twist lace.
 — C., 1146, Washing and peeling potatoes; pulp- [ing roots].
 — F., A. & J., 2620, Twist lace.
 — J., F., & A., 2620, Twist lace.
 Topping, J., & Gregory, J., 621, Cutting clay.
 Torr, C. W., 1924, Metallic tubes.
 Torrence, G. N., 2649, Mattresses.
 Toselli, J. B. (Clark), 1559, Grappling submerged objects.
 — (Clark), 4275, Grappling and raising objects.
 Touaillon, C. H. (Gaillard), 519, Stopping teeth.
 Toussaint, J., 619, Moulds for casting metals.
 Tower, B., 1872, Indicating velocity of shafts, &c.
 Towle, J., 1426, Treating sewage.
 Townsend, H. E. (Atwood), 3013, Boots and shoes.
 — (Atwood), 3183, Stitching button-holes.
 Townsend, J., 3483, Chlorine.
 — S., 3456, Cleaning boots and shoes.
 — S., 2217, Endless bands.
 Townson, H., 3463, Portmanteaus.
 Townson, W., & Bullough, J., 2400, Collars of throistles, &c.
 Tralue, W. (James), 1294, Needles.
 Tracy, H. R., & Lawton, J. W. (Clark), 363, Cabinets.
 Trainor, J., 892, Signalling on railways.
 Trash, F., 2977, Fire-indicating and alarm apparatus.
 Tregay, W., 2728, Drilling rocks, &c.
 Trench, G., & Faure, C. A., 3781, Explosive compounds.
 — G., Mackie, S. J., & Faure, C. A., 2062, Explo- [sive compounds].
 — G., Mackie, S. J., & Faure, C. A., 3612, Explo- [sive compounds].
 Trevelyan, W. R., 1817, Fire-arms.
 Trevisany, F., 2905, Advertising tablets.
 Trevor, W., & Edge, N., 1789, Looms.
 Trinquier, A. A., 2280, Fire-arms.
 Trüster, J. L. (Clark), 1705, Concentrated beer.
 Trotter, H., 3404, Lighting and extinguishing.
 Truchot, E. (Browne), 2140, Cutting paper.
 Trueman, G., & Scott, R., 1850, Lace-making.
 — H. P., 643, Measuring liquids.
 Truman, E. T., 124, Insulated telegraphic conductors, &c.
 Truss, T. S., 4487, Force pumps.
 Truswell, W., & Holden, R. W., 2867, Stoves.
 Tryon, F. (Lake), 2755, Swimming apparatus.
 Tube Works Co., National (Hunt), 1647, Steam injectors.
 Tucker, E., & Wallace, J. S., 1487, Protecting buildings [and ships from fire].
 — E., & Wallace, J. S., 3746, Extinguishing fire.
 — R., 2542, Thrashing machines.
 — W. H., 2558, Locks and lock furniture.
 Tuddenham, S., 1930, Carriages.
 Tugwood, J., 983, Cement for securing railway keys, &c.
 Turley, J. W., Newell, J., & Davies, E., 4338, Peat-fuel, &c.
 Turnbull, S., 170, Horse-shoes.

Turner, A., 1187, Elastic and non-elastic fabrics, &c.
 — A., 3297, Elastic fabrics.
 — B., 2021, Door hinges.
 — C., 3856, Scudding, fleshing, &c. skins.
 — E., 1820, Bolts or catches.
 — F. de M., & Sarney, T. S., 2087, Railways.
 — G., 2484, Tents; camp equipage.
 — J. A., 4139, Darning stockings, &c.
 — J. J., 3794, Working railways; railway wheels.
 — L., 855, Elastic fabrics.
 — W. A., & Manchester, J., 2311, Gassing yarns.
 Turney, F. N. & J., 305, Drying or finishing glue.
 — J. & F. N., 305, Drying or finishing glue.
 Terrettini, T. B. E., & Colladon, D. (Barlow), 3038, [Rock-boring].
 Turton, G., 1091, Railway buffers.
 — S., Jolley, W., & Birchall, J. T., 3778, Valves.
 — T., & Latham, E., 690, Transshipping cargo.
 Tweddle, H. W. C., 2642, Mineral oils.
 Twigge, N., 1693, Cleaning rice.
 Tydeman, B., & Manning, A., 3845, Beating casks.
 Tyler, E., 1013, Signalling on railways.
 — E., & Farmer, J. S., 2423, Railway signals.
 Tylor, A., 3735, Water-closets; water-supply apparatus.
 — A. & J. J., 277, Measuring and controlling liquids.
 — H., 2449, Polishing buttons.
 — J. J. & A., 277, Measuring and controlling liquids.
 — W. H., & Smeaton, W., 1028, Lavatories, baths, &c.
 Tyzack, E., 992, Knives and forks.

U.

Ulmann, G. H. (Clark), 4356, Buttons, brooches, &c.
 Underhay, F. G., 499, Bib-cocks.
 — F. G., 1732, Water-waste preventers.
 Underwood, E., & Phipson, W. A., 2229, Blind-rollers.
 — J., 2953, Coating metallic handles.
 — J., 3136, Coal vases, writing and dressing [cases, &c].
 Universal Signal Light Co. (Clark), 2390, Lanterns.
 Unsworth, T., 1268, Winding and doubling frames.
 — T., 3635, Flyers; spinning and doubling.
 Unwin, J., 2403, Coating boilers and boiler plates.
 — J., Brook, H. J., & Draper, E. G., 1492, Electro- [plating].
 — J., & Baker, W., 1493, Electro-deposition.
 — J., Brook, H. J., & Draper, E. G., 2454, Deposit- [ing metals].
 Upham, J. C., & Stearns, J. B., 256, Electric telegraphs.
 Upsom, J. W. (Lake), 3198, Tilting coal wagons; [screening coal].

V.

Vabe, P., & Chau, H. (Johnson), 3807, Raising liquids.
 Valentin, V. (Bonneville), 3660, Woollen fabric.
 Valentin, W. G., 3908, Treating oxide of iron for cyanogen.
 — W. G., & O'Sullivan, C., 3909, Treating starch [for products].

Valentine, P., Fox, A. D., Styles, J., & Barney, G. A. [(Clark), 2041, Springs].
 Vallé, B. H., 3784, Treating sawage.
 Van Anden, W. M. (Clark), 1996, Screw nuts.
 Van Camp, A., & Clark, G., 33, Pavements.
 Van de Weerd, R., 245, Motive-power.
 Vandenweghe, A., & Dale, F. L. V., 4098, Children's [carriages].
 Van der Mey, S. C. (Ansingh), 1933, Preventing railway [collisions].
 Van der Strat, E., 2526, Heating and lighting.
 Van Dyk, H., 199, Dressing and travelling bags.
 Van Geasen, H. (Lake), 1556, Label for cloth.
 Vanhoorde, J., & Rolland, N. (Mills), 635, Wheel barrows.
 Van Reitschoten, J. J., & Houwens, W. (Appleby), 1283, [Removing sand banks, deepening rivers, &c].
 Van Swyndregt, M. W. M., 3916, Shirt-fronts.
 — M. W. M., 4012, Buttons, studs, &c.
 Van Waeyenbergh, A., 1039, Working steam expansively.
 Van Winkle, A. J., & Brooks, R. C., 4209, Alcohol.
 Varinet, J., & Enoult, A. (Abel), 184, Dressing fabrics.
 Vaughan, E. P. H. (Dubois), 246, Air-gas.
 — (Messier), 1443, Whetting graving tools.
 — (Künzel), 1628, Metallic bearings.
 — (Count de Terbecq), 1644, Lime phosphates.
 — (Messier & Patron), 2117, Pen holders.
 — (Count De Terbecq), 2168, Treating phos- [phates of lime].
 — (Marquis of Las-Marismas), 2257, Air-pumps.
 — (Jerawec), 3220, Hand mirrors.
 — J., 4439, Stamping metals.
 Vavasseur, J., 1521, Projectiles.
 Ventress, R., 3820, Wood-working machinery.
 Verbert, E., & Daudenart, L. G. G. (Hughes), 911, [Baryta and stoptia].
 — E., & Daudenart, L. G. G. (Hughes), 913, [Treating liquors used in cleaning wool].
 Verdier, C. (Macabies), 4290, Meter and boiler feeder.
 Vere, J., Smith, R., & Stephenson, W., 193, Capsules.
 Verlinde, L. (Mewburn), 850, Raising & lowering weights.
 Vernier, P. C. & J. Droulers- (Combe), 3943, Hackling [machines].
 Vernon, W. J., 108, Stoppering bottles.
 Vianisi, L. (Lake), 1932, Electric telegraphs.
 Vicars, T. & T., & Smith, J., 699, Steam-boilers & furnaces.
 — T. & T., & Smith, J., 1793, Steam-generators & [furnaces].
 Vickess, S., & Buchanan, J., 923, Charcoal retorts.
 Vidal, M. E. E. Brossard, & Malligand, P. M. E. [(Clark), 1885, Ebullioscopes].
 Viehoff, K. J. (Balbani), 3196, Extracting peat.
 Vignet, frères (Clark), 2823, Woven fabrics.
 Villalard, E. N., & Courbier, A. (Sourzac), 3092, Driving [bands].
 Villeminot, A. (Johnson), 1542, Looms.
 Villeron, A., Bezinge, J. A., & Dordron, L. (Clark), 1049, [Butter].
 Villin, C., 1214, Fire-arms.
 Vincent, C., 4102, Windmills.
 Vincent, H. Lejeune- (Murdoch), 4039, Looms.
 Vitant, P. J. (Brewer), 1597, Looms.
 Vogel, C. (Haseltine), 4054, Cutting files.
 Vogt, M. (Greenwood), 3142, Screw nuts.
 Vogt, H. C. de, 81, Navigating the air.
 Voile, E. A., 1783, Pontefract pipes.
 Voisin, J. A., & Dronier, P., 1169, Producing light.
 Volk, J. H. (Lake), 3806, Grinding and polishing surfaces.
 Von Briesen, R., & Wenck, G. J. (Clark), 2690, Portable [fountains].
 Von Essen, W. S., 492, Cleaning steam-boiler tubes.
 Von Kropatschek, A., Count, 4337, Fire-arms.
 Von Seeger, E. (Wirth), 790, Collars and ornaments.

Vorster, J., & Grüneberg, H. (Johnson), 2639, Soda and [potash].
 Vose, R. (Sterne), 4394, Springs.
 — R., & Cliff, E. (Lake), 2712, Elliptic springs.
 Vosper, C. W., 548, Sewing-machine shuttles.
 — C. W., 1184, Sewing-machines.
 Voysey, R. W. O., Hamilton, J. B., & Wade, G., 4049, [Musical instrument strings].
 — R. W. O., Hamilton, J. B., & Wade, G. E., 4149, [Organs].
 Vrij, J. E. de (Blews), 1534, Purifying quinoidine.

W.

Wacker, C., & Boll, M. (Bonneville), 647, Ships' fenders.
 Wackrill, S. T., 4334, Air-cushions for bed pans.
 Wade, G., Voysey, R. W. O., & Hamilton, J. B., 4049, [Musical instrument strings].
 — G. E., Voysey, R. W. O., & Hamilton, J. B., 4149, [Organs].
 Wadsworth, J., 1046, Fire-lighters.
 Waeyenberch, A. van, 1039, Working steam expansively.
 Wagner, C. A., 2422, Railway and tramway couplings.
 Wagstaff, J. G., 2700, Water-heating apparatus.
 — J. H., 2573, Sheet metal boxes.
 — J. W., 4092, Turning hay and straw.
 — T., & Chamberlain, R., 3670, Loops or eyelets.
 Wainman, L. A., & Holmes, E. J., 4391, Steam-engines.
 Waithman, A., 1991, Twine or cord.
 Walden, J., & Platts, G. (Cheesbrough), 2928, Crimping [leather].
 Waldenström, E. H., & Mackie, A., 2510, Perforating [paper, &c.].
 — E. H., & Sumner, W., 3812, Copper singe [plates].
 Walker, A., 2003, Indicating revolutions of paddle [shafts, &c.].
 — A., 3445, Railway breaks.
 — B., & Pfau, J. F. A., 4129, Pumping; air [compressing].
 — C. V., 1026, Electrical train describer.
 — E., 1557, Damping paper for printing.
 — (Pauksch), 4254, Steam-boiler tubes.
 — E., & Clarke, W., 843, Ships' capstans.
 — F. D., 3075, Hydraulic motive power.
 — G., 134, Curtain hooks and clips.
 — J., 1164, Railway carriages.
 — R. P., & Danks, J. R., 2960, Cut nails.
 Walker, S., & Co. (Johnson), 475, Heckling fibres.
 Walker, T., 286, Utilizing waste heat of steam-engines.
 — T., 293, Transmitting electric currents.
 Walker, T. H. (Webb), 511, Sewing-machines.
 Walker, W., 2371, Steam pumps.
 — W., 3299, Rock-drills.
 — W., & Sturgeon, T., 2969, Condensing steam.
 — W. L., & Devoe, B. G., 4093, Metallic fences.
 — W. T., 1992, Gas purifiers.
 — W. T., 3988, Gas-purifiers.
 Walkley, L. V., & Pultz, J. P. (Elsam), 1577, Eyelets.
 Wallace, J., 2322, Potato diggers.
 — J., 3318, Gas burners.
 — J. S., & Tucker, E., 1487, Protecting buildings [and ships from fire].
 — J. S., & Tucker, E., 3746, Extinguishing fire.
 Wallach, H., & Jones, J. W., 3166, Turkey-red fabrics.
 Waller, R., 3017, Motive-power.

Wallis, A. S., 528, Checking tram-car fares.
 Wallwork, R., 2207, Disconnecting railway carriages.
 Walmsley, James & John, 2332, Warping machines.
 — John & James, 2332, Warping machines.
 Walsh, J. H., 2230, Tricycles.
 — J. H., 4351, Tricycle-velocipedes.
 Walsh, R. S. L. (Haseltine), 2288, Syringing bottles.
 Walter, N., 3510, Dry closets.
 Walther, A., & Stenger, A. (Wirth), 3524, Preparing malt.
 Walton, F., Harris, E., & Oliver, J. (Harris), 2053, [Distilling].
 Walton, F. A., 419, Fastenings for wearing-apparel.
 — J., 2378, Cutting hedges, &c.
 — W., 1376, Mounting card fillets on cylinders.
 Walworth, J., & Copping, R., 2067, Preparing wheat for [grinding].
 Wanchope, A., & Cowan, J., 1338, Gas.
 Wanklyn, F. A., 4431, Purifying water.
 Wannick, F., & Köppner, H., (Paget), 4354, Steam-engines.
 Wanzer, T. D. (McCune), 2420, Sewing-machines.
 Warburton, S., 2468, Singeing yarns.
 Ward, E. T., & Dyson, G. W., 2183, Utilizing old rails.
 — John, 4330, Driving printing presses.
 — Joseph, 1563, Drawing and spinning cotton.
 — Joseph, 2297, Locomotive engines.
 — S., 1854, Clearers for silk and cotton materials.
 — S., & Ellison, W., 3162, Chain locks.
 — T., 158, Railway breaks.
 Wardale, J. D., & Carrick, H., 786, Carrying wheels.
 Wardwell, G. J. (Haseltine), 4466, Motive-power engines.
 Waring, J. B. (Johnson), 1718, Drilling rock.
 Warn, J., & Price, H. W., 1986, Clamps.
 Warner, A., 1094, Iron.
 — E., & Woods, E. F., 2303, Hanging cart bodies.
 — H. & H. G., & Jackson, W., 2076, Box-irons.
 — H. G. & H., & Jackson, W., 2076, Box-irons.
 — R., & Aslin, 4250, Brooch fastener.
 — S., & Stanton, S., 775, Invalid bedsteads.
 — W. J., 864, Gas retorts.
 — W. J., 946, Gas-meters.
 — W. J., & Cowan, W., 1698, Gas-meters.
 Warren, F. P., 461, Flower pots.
 — S. H., & Wates, P. J., 2434, Charging, &c. retorts.
 Warsop, C., & Hill, H. W., 1181, Rock drills.
 Warth, A., & Jobbins, W. F. (Lake), 3582, Cutting tex- [tile materials].
 Warwick, J., 3513, Sewing-machines.
 Waterhouse, B., 2410, Passenger registers.
 Waterman, E., 996, Stamping out or embossing press.
 Waters, T. J. (Imray), 862, Laying telegraph cables, &c.
 Wates, P. J., & Warren, S. H., 2434, Charging, &c. retorts.
 Watkinson, J., & Batley, W. S., 3537, Drying-floors.
 Watson, A., 1907, Desks and despatch cases.
 — D., & Sumner, W., 1120, Tubes for boilers, &c.
 — G., & Thomson, G., 2913, Compound india-rubber [sheets].
 — G. L., 2321, Steering apparatus.
 Watson, J. (Mann), 356, Cranes.
 — (Mann), 3725, Cotton presses.
 — (Mann), 4427, Presses and pumps.
 Watson, J., & Davey, S., 2641, Cartridges.
 Watson, J. E. (Lake), 3518, Water level indicators.
 Watson, T., 3671, Velvets, &c.
 Watson, W. R., & Mirrlees, J. B., 972, Pumping engines.
 Watson, W. R., & Robertson, R. A., 2980, Fixing tubes in clarifiers, &c.
 Watt, A., 3831, Balloons; inflating.
 — P. B., Mann, G., & Pollard, C., 1640, Printing.
 Watterson, C., 456, Finishing printed and dyed goods.
 Wattles, J. W., 4154, Suspenders for trousers.
 Watts, J. E. (Metcalf & Gibbons), 3517, Valves.

- Watson, M.** (Wise), 829, Semaphore signals.
Waugh, J., 2256, Smoke prevention.
Weatherby, C. P. N., 2115, Ice-making and refrigerating.
Weaver, G. E., & Tibbitts, F. G. (Lake), 2368, Rolling [metals].
Webb, C. B. S., 1031, Filling casks.
 C. B. S., 3372, Racking apparatus.
Webb, C. H. (Lake), 730, Cartridges.
Webb, C. W., 3197, Roller skates.
 F. W., 442, Railway points and signals.
 F. W., 494, Railway points and signals.
 F. W., 1135, Steam-boiler injectors.
 F. W., 3916, Railway points and signals.
 H. (Walker), 511, Sewing-machines.
Webbing, W., 1127, Clasp for bracelets, watches, &c.
Webster, G. & J. F. (Daville), 2647, Sewing-machines.
Webster, J., 93, Converters used in making steel, &c.
 J., 465, Steel.
 J. & Reid, J., 4000, Lathes or machine tools.
Webster, J. F., & G. (Daville), 2647, Sewing-machines.
Webster, J. J., & Thompson, J. G., 393, Cleaning tram- [way tracks].
 W., 1548, Croquet balls, &c.
 W., Bodel, L. G., & Masse, J., 3277, Stamping [documents].
Wedekind, H., Chamberlain, H., & Craven, J. (Hoffmann), [4138, Kilns].
Weedermann, E. J., & Sons (Brewer), 660, Ships and [propellers].
Weeks, A. W. G., Deal, G., Lillywhite, G., & Launder, [A. O.], 1754, Hot-water apparatus.
Weems, J., 1720, Machine for recreation.
 W., 4470, Hydrostatic presses.
Weerd, R. van de, 245, Motive-power.
Wegmann, F. (Palmer), 823, Preparing meal.
Weigold, C. A. (Hammond), 1227, Treating tobacco.
Weild, E., 2226, Preparing sewing threads.
 E., & Cochrane, J. G., 4055, Drilling, and other [machine tools].
Weinrich, M. (Duncan), 1870, Treating sugar.
Weir, G. & J., 1329, Marine-engine governors.
 G. & J., 4352, Steam-boilers.
 James & G., 1329, Marine-engine governors.
 James & G., 4352, Steam-boilers.
 John, 4339, Lamps and wicks.
Welch, A. T. (Newton), 2197, Gas-burners.
Welch, W., 2714, Spring mattresses, bedsteads, &c.
Weldon, F., 1047, Ascertaining distances.
 R., 2813, Printing hosiery goods.
Welle, P. L., & Tabutiaux, A. P. E. (Henderson), 2164, [Winding weft; shuttles].
Wellens, J. C., 2244, Wharfe tubes.
Wells, H. (Fobes), 2561, Hook for threading needles.
Wells, J., 2338, Main cocks.
Wells, W. (Newton), 1781, Steam-engines.
Welton, T., 2628, Generating, &c. electricity.
Wenck, G. J., & Von Briesen, R. (Clark), 2690, Portable [fountains].
Wenmaekers, J. (Hughes), 2933, Constructing submarine [works].
Werdermann, R., 1438, Cutting rock or stone.
 R., 3156, Magneto-electric machines.
Weskott, F., Siller, A., Bayer, F., & Rumpff, C., 2071, [Oxidising anthracene for dyes, &c].
West, D. K., 662, Engines and pumps.
 E. J. (known as Cuffley), 906, Telescopes.
 H. J., 451, Ice-making.
 H. J., 2336, Ice-making.
 J., 1978, Gas-making.
 T., & Brookes, R. F., 1914, Wheels and axles.
 W., & Spittle, W. F., 359, Solitaires; sleeve links.
Westerby, T. W., 3455, Pressure and vacuum gauges.
Westhead, M. Brown, 1649, Venetian blind ladders.
 M. Brown, & Smith, R., 2610, Venetian blinds.
Westinghouse, G., 1540, Working breaks and signals.
Westley, J., 4045, Taps and valves.
Westly, T., Bibby, W., & Lang, J., 2143, Shuttles.
Westmacott, P. G. B., 60, Hydraulic capstans.
 P. G. B., 1642, Working lock gates.
 P. G. B., 1659, Lock gates and caissons.
Weston, D. Mc C. (Day), 772, Centrifugal machines.
Weston, G., 3914, Steam-boilers.
 J. H., 702, Coal gas.
 J. H., 810, Gas and lamps.
 J. H., 4239, Gas-burners and reflectors.
 P. A., & Parker, T., 3653, Pumps worked by [steam, air, &c].
 T. A., 3498, Cracking nuts, crushing bones, &c.
Weston, T. A. (Mewburn), 2842, Steam-gauge cocks.
Westrup, H. J., 39, Rudder indicating apparatus.
Westwood, J., & Baillie, R., 2191, Iron piles and columns.
 W. H., Wright, E. & E. T., 3345, Stop valves.
Wethered, E. R., 4445, Pulley blocks.
Weyergang, F. H., & Oswald, T. R., A. & W. R., 2684, [Steam-boilers].
Whale, W. E. (Schultz), 4277, Corset and dress improver.
Whaley, F., 2856, Pistons.
Whalley, J., 222, Hulling, &c. rice.
Wharton, J., & Yule, G., 4474, Hat bodies.
Wheatley, W., & Heaps, E. K., 2986, Heating & cooking.
Wheeler, C. A., 1377, Latches for doors, &c.
 N. W., 1847, Treating ores; steel.
Wheeler, S., Jerome, E., & Mesick, P., 1701, Boxes.
Wheelhouse, T., 1877, Cutting and paring leather.
Whelan, J., 3320, Cooking, &c.
Whitaker, H., 1858, Furnaces.
 R., & Holden, A., 2671, Measuring tapes.
 W., & Foster, J., 143, Cleaning reed dents.
White, C. M., 314, Tobacco pouches.
 G., Toon, J., & Donisthorpe, A. R. & G. E., 171, [Woollen yarns].
 M. G., 3304, Water-supply regulators.
 M. G., & Brown, M. H., 1061, Disinfecting.
 R. G., & Jones, G. H., 3157, Economising fuel, [&c. in producing steam].
 R. G., & Jones, G. H., 3511, Lighting and ex- [tinguishing lamps].
 S., & Lowe, S., 636, Railway signals.
 T., 2919, Racks or frames for dishes.
 W. A., & Brunt, J., 3865, Brick-making.
 W. G., & Sturgeon, T., 2085, Rock-drills.
 W. H., 2892, Motive-power.
Whitehead, H. W., 2344, Combing fibres.
 H. W., 4017, Preparing and spinning fibres.
 (Skene & Devallée), 2796, Gill-boxes.
 J., 3229, Earthenware pipes, bricks and tiles.
 P. O., & Bullough, J., 1365, Sizing yarn.
 T. J., 4315, Cooking stove & hot-air furnace.
Whitehouse, E. O. W., 1820, Producing electric-light.
 E. O. W., 1892, Revolution indicators and [recorders].
 J., 3527, Twist lace machines.
Whiteley, W., 1804, Roving and spinning.
 W., & Harling, G., 244, Looms.
Whitely, W. N. (Benson), 2173, Reaping and mowing.
Whiteman, F. H., 2453, Pianofortes.
 W. T., 270, Signalling on railways.
Whiteside, P. (Howlett), 2682, Clothes wringer.
Whiteway, W., 4008, Counterweighting window sashes, [blinds, &c].
Whitham, S., 2225, Rolling metals.
Whiting, J. B., 2104, Hot-air stoves.
Whiting, L., & Farrar, J. (Hamer & Giles), 2881, Moulds.
Whitmore, C. E., 626, Purifying middlings.

- Whitney, E. (Hughes), 628, Fire-arms.
 Whittaker, James, 3743, Bricks, tiles, &c.
 — John, & Smith, W., 2105, Railways; wedges.
 Whitbread, W., 2532, Treating sugar, syrups, &c.
 — W., 3343, Animal charcoal.
 Whittingham, J. (Payne), 348, Gas-making.
 Whitton, C., 2431, Steam pipe valves.
 Whitworth, C. F., 1095, Locks and latches.
 — John, 1266, Domestic fire-grates.
 — John, 3070, Lamps for lighting gas.
 — Sir Joseph, 3062, Compressing fluid metals.
 — Sir Joseph, 3063, Standard surface plates.
 — Sir Joseph, 3064, Pressing, shaping, and
 [forging metals.
 — T. S., & Higgins, J., 1884, Spinning fibres.
 Whyte, G., 1371, Electric railway signals.
 — G., 3722, Railway signals.
 Wiard, N. (Lake), 938, Ordnance and projectiles.
 Wibberley, J. T., 887, Winding cotton, &c. on reels.
 — J. T., 3124, Winding cotton, &c. on reels.
 Wichmann, C. (Patterson), 410, Steel railway "frogs."
 Widmark, H. W., 4331, Railway axle-boxes and guides.
 Wiegand, S. L. (Lake), 4316, Furnace grates.
 Wier, M. A., 1459, Indicating speed of machinery.
 — M. A., 2432, Indicating speed of machinery.
 Wigfull, W., & Roberts, A., 2413, Reaping machines.
 Wigg, C., 2578, Combined railway key, knife, &c.
 — F., 1513, Treating ores for smelting.
 Wignall, J. W., 1442, Self-winding clocks, &c.
 Wigzell, E., Pollit, J., & Mellor, W., 794, Piston packings.
 — E., Pollit, J., & Mellor, W., 2415, Cutting fabrics.
 — E., Pollit, J., & Mellor, W., 4085, Driving belts.
 Wilbur, E. P. (Newton), 441, Metal tubing.
 — E. R. (Herbert), 1790, Drawing off liquids.
 Wilcox, M., 759, Swing seals for chains.
 Wilde, H., 1554, Excavating coal.
 — H., 3000, Excavating coal.
 — J., 343, Grinding and polishing saws, files, &c.
 — T., 329, Railway chairs.
 — T., 2518, Railway chairs.
 Wiles, H. E. (Thouin), 2507, Motors.
 — J. F., 533, Propelling ships.
 Wiles, T. S., & Adams, A. P. (Newton), 4052, Ironing.
 Wiley, W. E., 1953, Pencil case movements.
 Wilke, H., 672, Steam-boilers.
 Wilkerson, S., 3347, Weighing, lifting, filling, &c. sacks.
 Wilkes, B., & Scattergood, J., 1827, Bolts and spikes.
 — B., & Scattergood, J., 2346, Nuts for screws.
 — J. P., & Aunier, A., 3087, Extracting sulphur.
 Wilkins, F., 2942, Wheel and other skates.
 — W., & Edwards, E., 2222, Knobs and spindles.
 Wilkinson, A., 4026, Waterproofing & coating compounds.
 — J., 1643, Motive-power.
 — R., 4229, Railway couplings.
 — W., 995, Thrashing machines.
 Wilks, G., 3621, Steam, air and water cylinders.
 Willacy, R., 2306, Manure distributors.
 Willans, J. G., 1038, Iron and steel.
 — J. G., 1612, Utilising and grinding lithomarge.
 — P. W., 974, Steam-engines.
 — P. W., 4189, Hydraulic engines and pumps.
 Willans, T. J. (Newton), 4084, Cooling and ventilating.
 Willans, W. H., 1911, Tubular or annular castings.
 Willby, J., 1248, Self-acting mules.
 Willett, G., Harris, R. J., & Lund, J., 2189, Ash-closet.
 — G., Harris, R. J., & Lund, J., 2567, Sewage filters.
 Williams, A. J., 2133, Revolving shutters.
 — D., & Gurr, J., 103, Anchors.
 Williams, D. (Schlesinger), 2340, Lawn-mowers.
 Williams, J. A. B., 1408, Artificial fuel.
 Williams, J. G. (Hunt), 1165, Horse hay forks.
 Williams, R. F., & Brett, H. R., 3115, Bottle crates.
 Williams, S. de la G., 3956, Kilns.
 — S. de la G., & Scott, H. Y. D., 599, Kilns.
 Williams, T. S., & Page, P. S. (Curtis), 24, Lamps.
 Williams, W., 315, Hanging window sashes and stiles.
 — Z. T., 3447, Ploughs.
 Williamson, C., 2862, Crinolines and bustles.
 — C., 3039, Corsets.
 Willis, G. L., 1890, Hydraulic governors.
 — H., & Blick, J., 4420, Slide-valves.
 Willis, J., 1871, Umbrellas and sunshades.
 Willock, H., 1578, Buttons.
 Willoughby, J. & S., Southwell, W. A., & Briggs, T. J.,
 [839, Tar.
 — J. & S., Southwell, W. A., & Briggs, T. J.,
 [1126, Evaporating pans.
 — S. & J., Southwell, W. A., & Briggs, T. J.,
 [839, Tar.
 — S. & J., Southwell, W. A., & Briggs, T. J.,
 [1126, Evaporating pans.
 Willson, A. (Spence), 2394, Railway couplings.
 Wisher, H. B., 1543, Withdrawing liquids from casks.
 Wilson, A., 2816, Releasing ingots from moulds.
 — A., & Brook, E., 427, Consuming fuel in furnaces.
 Wilson, C. F., & Folk, J. E. (Newton), 458, Bolsters, &c.
 [for spindles.
 Wilson, G., 2948, Sewing-machines.
 — G., & Smith, A., 3365, Railway passes.
 — G. A., 587, Printing machines.
 — G. A., 2921, Printing machines.
 — G. H., 378, Keyless watches.
 — H., & Steel, J., 2397, Cooling & heating liquids.
 — James, 4451, Weaving harness, curtain blinds,
 [&c.
 Wilson, James (Lake), 570, Paddle wheels.
 Wilson, James E., 2042, Propelling vessels.
 Wilson, Joel (Kyte), 339, Metallurgical furnaces.
 Wilson, John, 1621, Steam-boilers.
 — John, 3416, Steam-boilers.
 — John G. (Herbillon), 3763, Steam-engines.
 — John H. (Craig & Brevoort), 2059, Valves.
 — Matthew, 534, Stench traps.
 — Matthew, 1424, Supplying oxygen to rooms, &c.
 — Matthew, 3681, Disinfecting and deodorizing.
 — Maximilian, Hall, D., & Taffinder, J., 3971,
 [Working saw frames.
 — N., 4396, Sewing-machines.
 — P., 166, Ploughs, &c.
 — R., 2448, Printing.
 — S. W., 75, Electrical railway breaks.
 — T. W., 4110, Shop-fixtures.
 — W., & Battersby, J., 1651, Chaff-cutters.
 — W., & Battersby, J., 3109, Horse-gear for driving
 [machinery.
 — W., & Battersby, J., 3798, Chaff cutters.
 — W. C., & Candlish, J. B. (Munk), 2391, Cigars.
 Wilton, H. S., 4444, Saddles and saddle girths.
 Wiman, E., & Angström C. (Hald), 3093, Steam-boilers
 [and tubes.
 — G. A. (Jensen), 3533, Electric-bell.
 Wimshurst, H., & Reed, E. J., 3625, Propelling ships.
 — J., 1771, Indicating revolutions.
 Wiman, T. (Johnson), 893, Organ stops.
 Winder, R., 3137, Type-composing machinery.
 Window Co., Bradley (Gedge), 91, Ventilating window.
 Wing, D., 4457, Horse-shoes.
 Wingfield, W. C., 685, Portable tennis court.
 Winkle, A. J. van, & Brooks, R. C., 4209, Alcohol.
 Winter, G. K., 2637, Communicating in trains.
 — H., 1081, Harnessing horses to vehicles.
 Wippert, F., & Lambrecht, W. (Lake), 3351, Galvano-
 [hydrostatic apparatus.
 Wirth, F. (Von Seeger), 790, Coffins and ornaments.

- Wirth (*Steinheil & Steinheil*), 1124, Photographic instruments.
- (*Angst*), 1374, Knitting machines.
- (*Furnell*), 1508, Steam-boilers.
- (*Boudriot*), 2201, Brick-making.
- (*Kleinpell & Dramburg*), 2206, Bearings.
- (*Langen*), 2360, Charcoal furnaces.
- (*Langen*), 2606, Refining sugar.
- (*Kleinpell & Dramburg*), 2614, Motive-power.
- (*Hahn*), 2680, Watchman's time-detector.
- (*Reissig*), 2884, Disinfecting candles & pastiles.
- (*Gruenzweig*), 3323, Oil-color.
- (*Humboldt Machines Manufacturing Co.*), 3490 [Boring rocks.
- (*Stenger & Walther*), 3524, Preparing malt.
- (*Leiter*), 4192, Syringes.
- (*Hasenclever*), 4291, Chlorine.
- Wise, W. H. R., 4176, Artificial manures.
- W. L. (*Pratt & Parsons*), 659, Railway wheels.
- (*Watson*), 829, Semaphore signals.
- (*Sboril*), 1242, Germinating and drying grain.
- (*Preusser*), 1763, Artificial stone.
- (*Yagn*), 2155, Feeding steam-boilers.
- (*Le Tellier*), 2496, Purifying water.
- (*Biega*), 2605, Stop valves.
- (*Laufaurie & Potel*), 2650, Lamps.
- (*Zboril*), 3208, Germinating and drying grain.
- (*Coignet*), 4325, Steam pressure regulator.
- Withers, S., & Barton, C., 1938, Window sashes.
- Wolcott, C. C. & Wood, W. W. W. (*Johnson*), 2795, Motive-power.
- Wolf, E., 344, Pipes for smoking.
- Wolff, E. & L., 4143, Pencil cases.
- L. & E., 4143, Pencil cases.
- Wollaston, C. J., 596, Railway recording apparatus.
- Wolstenholme, J., & Thorpe, C., 4212, Steam pumps.
- Wood, B., 960, Boxes for advertising, &c.
- C., 201, Granulating iron.
- C., 3925, Brick-making.
- G., & Lewis, J. W., 180, Stoves or ranges.
- G. R., 2814, Furnaces.
- James, 389, Ornamenting papier-mâché and japanned wares.
- James, 2123, Spring hinges.
- John, Allbut, J., & Robbins, J., 3408, Chilled rolls.
- John, & Rollason, J. G., 784, Ornamental chains.
- John, & Rollason, J. G., 3600, Solitaires, studs, &c.
- Joseph, 1085, Kitchen ranges, fire grates and stoves.
- R. M., & Salmon, J., 2597, Cutting paper, &c.
- Wood, Walter A. (*Griffin*), 4124, Reaping and mowing.
- (*Walter A. Mowing & Reaping Machine Co.*, & [*Cranston*, W. McL., 2564, Reaping-machines.
- Wood, William A., 1816, Mowing and reaping-machines.
- Wood, William W. W., & Wolcott, C. C. (*Johnson*), [2795, Motive-power.
- Woodcock, James, 3423, Lubricating slides of steam-engines, &c.
- James, & Oclec, F. H., 1661, Slide valves.
- James, & Oclec, F. H., 1806, Lubricating slides.
- John, 720, Water supply valves.
- John, P., & Brown, W. A., 1908, Indicating revolutions.
- T., 391, Carving horns of animals.
- Woodley, J. F. P., & Anderson, J., 102, Wood casks.
- Woods, A., & Stevens, T. T., 3035, Saving life at sea.
- E. F., & Newman, W., 2304, Thrashing machines.
- E. F., & Warner, E., 2303, Hanging cart bodies.
- G., 3711, Drying lumber, &c.
- H., 4434, Steam-engine expansion gear.
- J. E. T., 262, Steam and other boilers.
- Woods, P. (*Haseltine*), 3428, Supplying water to boilers.
- Woodward, H., 2609, Coin assorter.
- J., 128, Paving-blocks and drain tiles.
- L., & Mellor, H. M., 639, Knitting machines.
- Woolhouse, H., 3764, Sheep-shears.
- Works, A. J., & Todd, P. T. (*Haseltine*), 3682, Rotary engines.
- Wormald, D., 337, Cut nails.
- Worrell, T. B., 642, Bank locks.
- Worssam, C., 272, Motive-power machines.
- Wortendyke, J. B. (*Lake*), 1068, Cutting paper; paper twine.
- Wright, C., 1776, Fire-proof warehouses.
- C., 4114, Picking sticks for looms.
- C., 4115, Loom shuttles; smoothing, &c., veneers.
- D. P., 1185, Filling lamps and indicating when full.
- Edmund, 140, Operating sewing-machines.
- Edmund, 877, Operating sewing-machines.
- Edmund, 2903, Operating sewing-machines.
- Edmund, 3958, Operating sewing-machines.
- Edward, & E. T., & Westwood, W. H., 3345, [Stop valves.
- Edward G. (*Howe*), 3311, Electrical burglar alarms.
- Edward T. & E., & Westwood, W. H., 3345, [stop valves.
- Edwin, & Todd, A., 3968, Revolving shutters.
- Frank, 3867, Gas governors.
- Frederick, 1532, Stopping bottles.
- G., & Redmayne, T., 3466, Kitchen ranges.
- J. T., & Laidler, W. H., 2376, Hackling, &c. fibres.
- R., 4214, Castors.
- T., 3302, Railway signals.
- T., & Fox, I., 3903, Fabric for various purposes.
- Wrigley, T., Bradley, G., & Matters, J., 2756, Consuming smoke.
- Wübbel, C. (*Benninghaus*), 3386, Earth-boring.
- Wuenschemann, R., & Field, A., 1682, Mould candles.
- Wyatt, W. P., 1406, Vapour, shower and medicated baths.
- Wyley, A., 2238, Fire-arms.

Y.

- Yagn, N. F. (*Wise*), 2155, Feeding steam-boilers.
- Yarrow, E. H., 598, Gas.
- Yates, H., 197, Ornamenting lace.
- W. E., 2509, Horse-shoes.
- Yeates, S. M., 4141, Telegraphs.
- Yeo, F. A., 3823, Moulding presses.
- Young, A. W., & Thorpe, A. C., 1699, Breast pin stems.
- James, 2927, Umbrella and parasol covers.
- Joseph, 3153, Paper shirt collars and fronts.
- R., 3940, Purifying ground wheat.
- Young, Z. K. (*Lake*), 4025, Securing buttons.
- Younghusband, G. & G. T., & Rockliffe, W. & J. W., 4079, [Preserving composition.
- G. T. & G., & Rockliffe, W. & J. W., 4079, [Preserving composition.
- Yule, G., & Wharton, J., 4474, Hat bodies.
- Yull, G. T., 3102, Cutting and collecting crops.
- G. T., 3899, Raising, moving, &c. heavy bodies.

Z.

Zadig, P., 2726, Paramecia.
 Zalkind, J., 742, Opening device for vial cases, &c.
 Zambra, J. W., & Negretti H., 119, Thermometers.
 — J. W., & Negretti H., 3114, Thermometers.
 — J. W., & Negretti H., 3545, Health indicator.
 Zanni, G., 1455, Telegraphic cables.

Zard, J. W., 1341, Drying and drying grain.
 — J. W., 1350, Drying and drying grain.
 Zeder, F. E., 1074, Drying machine for horses.
 Zimmermann, W. E., Alexander, J. S., Brown, H. F., &
 — Vincent, J. G., Johnson, 1511, Curing coal, &c.
 Zupfer, W., 1319, Furnish.
 — M., 177, Furnish.
 — M., 1774, Furnish: studing ships.
 Zucchi, L. de, 1175, Drying machine, &c.
 — L. de, 1180, Drying machine, &c.
 Zuel, F., & Finkelman, J., 1884, Curing wood.

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15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.



ALPHABETICAL INDEX
OF
PATENTEES AND APPLICANTS FOR PATENTS OF
INVENTION,

For the Year 1875.

Printed and Published by Order of the Commissioners of Patents,

UNDER THE

ACT of 15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.

BY BENNET WOODCROFT, F.R.S.,

CLERK TO THE COMMISSIONERS OF PATENTS.

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1876.

ALPHABETICAL INDEX

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For the Year 1875.

[The names printed in *Italic* are those of the persons by whom the inventions have been communicated to the Applicants for Letters Patent. The figures following the names are the consecutive numbers of the Applications.]

[Aba-Adc]

[Adi-An]

A.

Abadie, J. (Dann), 2784, Aug. 7, Mowing and reaping.
Abbott, J., & Gidlow, T., 655, Feb. 23, Steam-boilers [and furnaces].
 — *T., Ainsworth, T., Ellis, J., & Helm, T.*, 2908, [Aug. 18, Dobby for looms].
Abel, C. D. (Daimler), 71, Jan. 8, Motor-engines.
 — *C. D. (Smith & Smith)*, 244, Jan. 22, Steam-boilers.
 — *C. D. (Fayol)*, 998, Mar. 18, Respiratory apparatus.
 — *C. D. (Ribourt)*, 1226, Apr. 5, Locomotives; regulating pressure of steam, &c.
 — *C. D. (Charles & McKain)*, 1240, Apr. 6, Nuts.
 — *C. D. (Tessie du Motay)*, 1305, Apr. 10, Treating [wild silks for dyeing, &c.].
 — *C. D. (Meunier)*, 1433, Apr. 20, Flapped axles.
 — *C. D. (Mathian & Solet)*, 1545, Apr. 27, Heating [air, &c.].
 — *C. D. (Blake)*, 1829, May 18, Spades, &c.
 — *C. D. (Binns & Barnes)*, 1898, May 24, Shovels, [spades, &c.].
 — *C. D. (Reishauer & Bhentschli)*, 2172, June 14, [Bending railway rails].
 — *C. D. (Hahn)*, 3151, Sep. 8, Cranes.
 — *C. D. (Otto)*, 3615, Oct. 18, Gas and air engines.
Abercrombie, W. (Gardner), 1264, Apr. 7, Clamping [window-sashes].
 — *W. (Gardner)*, 1788, May 13, Tenoning or [relishing].
Absalom, W., & Griffiths, E., 151, Jan. 14, Steering ships.
Acheson, G., & Kennedy, W., 40, Jan. 4, Spinning.
Achtelstetter, T., & Von Sawiczewsky, S. (Jensen), [3729, Oct. 27, Preserving meat].
Ackerman, B., 502, Feb. 10, Fertilizers.
Ackers, W., & Dingley, G., 4356, Dec. 16, Getting coal.
Adam, A. C., 1578, Apr. 29, Paving.
 — *J., & Paris, J.*, 1346, Apr. 14, Packing cases for [bottles, &c.].
Adams, J., 3237, Sep. 16, Charging vessels, &c. with gas, &c.
 — *R.*, 798, Mar. 4, Spring hinges or door springs.
 — *T.*, 3761, Oct. 29, Safety-valves.
 — *W.*, 3057, Aug. 31, Cutting or quarrying stone.
 — *W., & Livesey, J.*, 4390, Dec. 18, Rolling stock [of railways, &c.].
Adamson, D., 3099, Sep. 3, Steam-engines.
Adamson, W. (Johnson), 381, Feb. 2, Starch; fermented [liquors].
Adamson, W. B., 2021, June 2, Cutting & dressing stone, &c.
Adce, F. (Lake), 3001, Aug. 26, Traps for basins, &c.

Adie, P., 421, Feb. 4, Clipping animals.
 — *P.*, 2640, July 24, Clipping animals.
Adorno, J. N., 2382, June 30, Watches and clocks.
 — *J. N.*, 4498, Dec. 24, Watches and clocks.
Ager, N., 2860, Aug. 13, Locks for railway carriages, &c.
Aguillet, J. M., & Rothmeyer, F. (Clark), 2122, June 9, [Pistons].
Ainscow, J., 1767, May 12, Fixing railway wheel tyres.
Ainsworth, T., Ellis, J., Helm, T., & Abbott, T., 2908, [Aug. 18, Dobby for looms].
Aird, D. A., 2848, Aug. 12, Signalling in trains.
 — *D. A.*, 3649, Oct. 21, Railway signals.
 — *D. A.*, 4096, Nov. 25, Tobacco-pipes.
Aitchison, A., & Whyte, J., 3680, Oct. 23, Gas.
Aitken, H., & Young, W., 2725, Aug. 3, Gas.
 — *R.*, 3905, Nov. 10, Bridges.
Akeroyd, J. B., Ward, D., & Sagar-Musgrave, J. M., [2572, July 19, Pump buckets and valves].
Alcock, S. H., 4236, Dec. 7, Sifting cinders for dry-ash [closets].
Alden, F., & Alexander, A. (Johnson), 1927, May 26, [Steam-engines].
Aldred, S., 1187, Apr. 1, Railway sleepers.
 — *S.*, 3330, Sep. 23, Railway sleepers.
Alexander, A., & Alden, F. (Johnson), 1927, May 26, [Steam-engines].
Alexander, E. P. (Benwell & Humphreys), 196, Jan. 19, [Bale-bands].
 — *E. P. (Laine)*, 921, Mar. 12, Fire-arms.
 — *E. P. (Mann & Paterson)*, 1017, Mar. 19, [Fittings of railway carriages, &c.].
 — *E. P. (Barker)*, 1633, May 3, Railway brakes.
 — *E. P. (Rowan)*, 2154, June 12, Condensing [steam, &c.].
 — *E. P. (Rowan)*, 2171, June 14, Steam car- [riages].
 — *E. P. (Bürgin)*, 3243, Sep. 16, Magneto- [electric machines and engines].
 — *E. P. (Herland)*, 3681, Oct. 23, Treating [sea-weed].
 — *E. P. (Michel)*, 4088, Nov. 25, Carbonizing [vegetable materials in wool, &c.].
 — *E. P. (De Bisschop)*, 4342, Dec. 15, Gas- [engines].
 — *J.*, 674, Feb. 24, Compressing engines.
 — *J. W. (Ferguson)*, 3390, Sep. 29, Lowering, [&c. ships' boats].
Alfieri, E., & Dumont, A., 512, Feb. 11, Lockets.
Alison, J., 957, Mar. 15, Steam-boilers.
Allan, G., & Brown, J. W., 525, Feb. 12, Telegraphs.
 — *W.*, 297, Jan. 26, Drilling-machines.
 — *W.*, 1846, May 19, Tube plugs for marine-boilers.

- Allan, W., 3532, Oct. 12, Railway breaks.
 — W., 4058, Nov. 22, Applying screw stays to boilers.
 — W., & Johnson, S., 191, Jan. 18, Heating feed-
 [water; condensing steam.
 — W., Johnson, S., & Smith, J., 3429, Oct. 2, Marine
 [buffers.
 Allanson, E., 2057, June 4, Hay and corn elevators.
 Allardyce, R. A., 2417, July 3, Wind shute or sail.
 — R. A., & Graham, G., 3588, Oct. 15, Boat-davit.
 Allatt, J. D., & Patton, J. A., 3931, Nov. 12, Stoppering
 [bottles.
 Allegretti, I., 3877, Sep. 27, Refrigerators.
 Allen, A., 3127, Sep. 7, Railway breaks.
 — C. B., & Fawcett, T. C., 645, Feb. 22, Brickmaking.
 — D., & Kemp, S., 3424, Oct. 2, Roller skates.
 Allen, H. (Newton), 1423, Apr. 19, Illustrating the earth's
 [motion, lines of light, heat, &c.
 — J. F. (Lake), 2182, June 14, Rivetting machines.
 — J. R. (Grundy), 4044, Nov. 20, Carbureters.
 Allen, R. N., & Pullman, A. B., 1112, Mar. 27, Railway
 [wheels.
 — R. N., & Pullman, A. B., 1297, Apr. 9, Railway
 [wheels.
 — T. P., 1562, Apr. 28, Metal tubes.
 — W., 269, Jan. 23, Raising and forcing fluids.
 Alley, S., 1522, Apr. 26, Removing submarine rocks.
 — S., 3413, Oct. 1, Bearing feelers.
 Allibon, G., Manbré, A., & Beldam, W. A., 264, Jan. 23,
 [Steam-boilers.
 Allin, F. W. (Gee), 1973, May 29, Cutting, &c. pipes;
 [tapping nuts, &c.
 Allin, S. S., 3481, Oct. 7, Cleaning and hulling grain, &c.
 Alliot, J. B., & Fryer, A., 2225, June 17, Draining and
 [concentrating sugar, &c.
 — J. B., & Fryer, A., 4395, Dec. 18, Vacuum pans,
 [pumps, &c.
 Allison, R., & Gibbons, C. B., 2712, July 31, Preserving
 [solids and liquids.
 — W., & Scarborough, G., 3791, Nov. 1, Looms.
 Allmann, J., 996, Mar. 18, Steam-traps.
 Allport, D. (Espeut), 3465, Oct. 5, Sugar.
 — S. B., 2535, July 15, Gauging bores of gun-bar-
 [rels, &c.
 Allwood, A. R., 4839, Dec. 15, Sewing-machine needles.
 Alsop, W., 2816, Aug. 11, Thinning root crops.
 Alston, W., 171, Jan. 16, Adjustable chairs, &c.
 Altman, H. J., 979, Mar. 17, Fire-arms.
 Altree, Q., & Gough, H. D., 3470, Oct. 6, Differential
 [pulleys.
 American Life Saving Suit Co. (Clark), 2283, June 22,
 [Saving life at sea.
 — Sewing-Machine Co., Hamburg- (Jensen), 26,
 [Jan. 2, Printing metals.
 Amory, J., 3284, Sep. 20, Consuming smoke; heating
 [feed-water.
 Amos, C. F., & Smith, H. W. R., 2006, June 1, Valve gear.
 — M., 3985, Nov. 16, Tools for dividing iron.
 Anderson, A., 4853, Dec. 15, Sewing-machine shuttles.
 — D., 4019, Nov. 19, Ventilators.
 — G., 2843, Aug. 12, Gas; supplying gas.
 — G., & Mason, M. F., 2904, Aug. 18, Bottling
 [and drawing off liquids.
 — I. E., & Nelson, L. (Paine & Paine), 2049,
 [June 3, Electro-magnetic motors, &c.
 — Sir James, Bull, E., & Spratt, G. O., 2844,
 [Aug. 12, Electric-telegraphs.
 — John, & Watson, M., 962, Mar. 16, Self-locking
 [box.
 — Joseph, 4314, Dec. 13, Stop-cocks or valves.
 — M. F., 1845, May 19, Treating sewage.
 — M. F., & Rotherham, A., 4177, Dec. 2, Dye-
 [ing and preparing silk, &c.
 Anderson, P., & Burkinshaw, J., 2165, June 12, Life-boats.
 — R. C., 825, Mar. 5, Generating steam.
 — S., & Rogers, J. B., 2755, Aug. 4, Communi-
 [cating between shore and vessels; saving life
 [at sea, &c.
 — W. L., 1992, May 31, Producing equilibrium
 [in ships' cabins, &c.
 Andrew, C. B., Burrows, W., & Atkins, G. B., 4541,
 [Dec. 30, Producing patterns in metals on silk
 [goods, &c.
 Andrews, E. P. S. (Broadbridge), 4183, Dec. 3, Tables.
 Andrews, G. H., 3839, Nov. 4, Table knives.
 Andrews, W. D. (Newton), 1925, May 26, Hoisting
 [apparatus.
 Andrews, W. W., & Urquhart, J., 3857, Nov. 5, Gas-meters.
 Angel, B., & Emmet, C., 3460, Oct. 5, Indicators or gauges.
 Angst, A., 3930, Nov. 11, Boots and shoes.
 — A., 3951, Nov. 13, Pegging boots and shoes.
 Ankers, J., 2593, July 21, Lubricating axles.
 Annan, D., 809, Mar. 4, Furnaces.
 Annett, J. E., 3427, Oct. 2, Railway points and signals.
 Anquez, M., 914, Mar. 11, "Gibus" hats.
 Anson, W., & Deeley, J., 1756, May 11, Fire-arms.
 Anthoni, G. (Wise), 2828, Aug. 11, Springs and other
 [parts of carriages.
 Anthony, E., & Taylor, W. W., 1127, Mar. 27, Printing.
 — E., & Taylor, W. W., 3056, Aug. 31, Printing.
 Antifriction Co., The Lathrop (Clark), 3148, Sep. 7,
 [Antifriction bearings.
 Antisell, T. M., & Bruce, De V., 2016, June 2, Vapor
 [engines.
 Apperly, J., 1481, Apr. 22, Steam-boilers.
 Appleford, W. G., & Blacklock, J. A., 3546, Oct. 12,
 [Sewing-machines.
 Appleton, C. J. (Lake), 3848, Nov. 4, Knitting.
 Appleyard, B., & Stead, H., 2033, June 2, Staining
 [fabrics.
 Archer, J., & Draper, F., 2272, June 22, Twist lace machines.
 Argence, P. N. d', & Delamare, F. (Newton), 2161,
 [June 12, Ornamenting fabrics.
 Armanino, L., 4247, Dec. 8, Colouring photographs.
 Armengaud, J. (Cornevin), 2183, June 10, Steam-boilers.
 Armengaud, J. (Imray), 4366, Dec. 16, Preserving meat.
 Armstrong, A., 4364, Dec. 16, Safety-cages for mines.
 — J., 142, Jan. 14, Railway switches.
 — J., Dean, W., & Holden, J., 4433, Dec. 22,
 [Arranging bogies, &c. in locomotives.
 — R., Kellett, H., & Macfeggan, W. S., 4059,
 [Nov. 22, Pumps.
 Arnold, A., 2958, Aug. 23, Earrings.
 Arnold, L., & Kidd, J., 66, Jan. 7, Gas.
 Arnold, W., 593, Feb. 18, Metal wheels.
 Arnoux, G. (Clark), 3972, Nov. 15, Valves.
 Arrol, W., 2191, June 15, Twisting cotton & other threads.
 Arrowsmith, J. J., & Ferguson, H., 3477, Oct. 7, Tube
 [stoppers.
 Arson, L. F. A. (Sugg), 4427, Dec. 21, Maintaining water
 [level in gas-meters.
 Ascough, J., 3333, Sep. 23, Brooms and brushes.
 — W., 690, Feb. 25, Combined bevel, square, &c.
 Ascough, W. (Soul), 2962, Aug. 24, Combined bevel,
 [square, &c. and tool holder.
 Ashe, R., 2204, June 15, Sewing-machines.
 Asher, G., 665, Feb. 23, Soldering irons.
 — G., 3505, Oct. 9, Charcoal box-irons.
 Ashley, F. & J. T. (Newton), 4527, Dec. 29, Feeding
 [printing-presses, &c.
 Ashley, J., & Martin, W. J., 1922, May 26, Spinning.
 Ashley, J. T., & F. (Newton), 4527, Dec. 29, Feeding
 [printing-presses, &c.
 Ashton, H., 4008, Nov. 18, Taps and valves.
 Ashworth, G. & J. J., 1618, May 1, Warping.

Ashworth, J. J. & G., 1618, May 1, Warping.
 Aspinwall, E. O., 249, Jan. 22, Candle and lamp wicks.
 — L. A., 4163, Dec. 2, Potato diggers.
 Aston, A. J., 609, Feb. 19, Solitaires, studs, &c.
 — J. J., 1512, Apr. 24, Paddle propellers.
 — T., 3428, Oct. 2, Repairing ships.
 Atcherley, R. J., & Scoffern, J., 2284, June 22, Acetic acid.
 Atha, J. R., & Terry, J., 3986, Nov. 16, Teaching the [pianoforte, &c.
 Atherton, J., 396, Feb. 3, Pipe joints; securing tubes.
 — J., 1256, Apr. 7, Spanner or key.
 — F., 872, Mar. 9, Looms.
 — W., & Lomax, J., 699, Feb. 25, Looms.
 Atkin, R., 92, Jan. 11, Life-boats, rafts, &c.
 — R., 1415, Apr. 19, Mariner's compass.
 — R., 2485, July 9, Life-boats, &c. lowering same.
 Atkins, E., 2773, Aug. 5, Furniture castors.
 — E., 2970, Aug. 24, Solitaires, sleeve-links, &c.
 — E., 4082, Nov. 24, Sash-fasteners.
 — J., 666, Feb. 23, Metallic bedsteads and cots.
 — J., & Torr, C. W., 594, Feb. 18, Gasaliers, &c.; [gas-brackets.
 — T., 527, Feb. 12, Ventilating.
 Atkinson, B., 2733, Aug. 3, Railways.
 — John, 3312, Sep. 22, Mortising by power.
 — Joseph, 1765, May 11, Knife-cleaning machinery.
 — W., & Mann, E. & W. H., 4095, Nov. 25, Fuel [economizers.
 Attenborough, J. G., & Mason, S. F., 2761, Aug. 5, Ve- [locipedes.
 Atterbury, G., & Boyle, J., 4210, Dec. 6, Steam-engine [furnaces.
 Atkins, G. B., Andrew, C. B., & Burrows, W., 4541, [Dec. 30, Producing patterns in metals on silk [goods, &c.
 Atwater, F. (Stevens), 2090, June 7, Compositions for [cutting, grinding, &c.
 Atwood, L. J. (Holmes), 3211, Sep. 14, Compressing [metal waste.
 Aubert, A. E. (Brewer), 3120, Sep. 6, Preserving alimen- [tary substances.
 Aubertin, E., Boblique, L., Leplay, H., & Box, J., 181, [Jan. 16, Phosphates and phosphorus.
 — E., Boblique, L., Leplay, H., & Box, J., 214, [Jan. 20, Disinfecting sewage, &c.
 Aubin, C., & Wright, F., 2746, Aug. 4, Locks & latches.
 — J., 1409, Apr. 17, Purifying flour.
 Aubriot, E., 1797, May 14, Ornamenting glass.
 Aubry, A., Chauvin, F. M. A., & Goizet, L. H., 2410, [July 3, Electric submerged lamp.
 Auchinvole, J. (Bouhon), 2713, July 31, Recovering in- [digo from fabrics, &c.
 Audinwood, W., 1936, May 27, Chaff-cutters.
 Auer, W. von, & Coombs, R. T. (Clark), 2092, June 7, [Ships' berths, &c.
 Austen, A., 3497, Oct. 8, Water-closet paper.
 Austin, J. & P., 929, Mar. 12, Milling-machines.
 — P. & J., 929, Mar. 12, Milling-machines.
 Antier, C. (Dubuc & Mutel), 2898, Aug. 17, Washing [clothes, &c.
 Avery, H. G., 589, Feb. 18, Dress suspenders.
 Aves, W. O., 3485, Oct. 7, Bicycles; wheels.
 Avis, W. H., 1850, May 19, Mitreing, tenoning, &c.
 Aylesbury, H., 262, Jan. 23, Bottle-stoppers.
 Ayton, P. E., 84, Jan. 9, Attaching knobs to spindles.

B.

Babbitt, B. T. (Newton), 1676, May 5, Rotary-engines.
 Baber, H., Barelay, R., & Fry, J. D., 1168, Mar. 31, [Printing on metal plates.

Bablon, V., 1194, Apr. 2, Gas and fluid regulators.
 — V., 1872, May 21, Photometers.
 Bacon, E., 3480, Oct. 7, Exhibiting pictures, &c.
 — E. C., 2269, June 22, Combined door fastener, [alarm, and bell.
 — G. W., 1074, Mar. 24, Mangles and wringers.
 — J., 1683, May 6, Oil pressing machinery.
 Badcock, J., 280, Jan. 25, Ladies' dress improver.
 — J., 4226, Dec. 6, Dress improvers.
 Baerle, V. van (Wirth), 1382, Apr. 15, Bleaching fabrics, &c.
 Baerlein, M., 2866, Aug. 14, Mordanting, dyeing, &c. [yarns.
 Baffoy, P. H., Dupré, P. S. E., Rogé, H. N., & Poret, E. [(Clark), 288, Jan. 25, Preserving woven fabrics.
 Baggeley, H., 4067, Nov. 23, Material for buildings, pave- [ments, &c.
 Bagot, A. C., 945, Mar. 13, Heat or pressure indicator.
 Bailes, R., & Hallsworth, S., 573, Feb. 17, Treating sewage.
 — R., & Hallsworth, S., 1165, Mar. 31, Purifying gas.
 — R., & Hallsworth, S., 1752, May 11, Purifying gas.
 Bailey, J., 1878, May 22, Jacquard machines.
 — J. H., 3808, Nov. 2, Railway points.
 — M., 2048, June 3, Slipper.
 — S. H., 3367, Sep. 25, Screw-cutting or chasing.
 — T., 1244, Apr. 6, Spinning and doubling.
 — W. H., 539, Feb. 13, Steam-boiler fittings.
 Baillie, R., 4381, Dec. 17, Cranes.
 — R., & Westwood, J., 341, Jan. 29, Iron plates.
 Bailly, P. (Brown), 4329, Dec. 14, Packing stuffing-boxes.
 Bain, L., 1253, Apr. 7, Checking receipt of money, &c.
 — L., & Urch, W. H., 3602, Oct. 16, Checking receipt [of money, &c.
 Bainbridge, C. E., & Hall, C. E., 1460, Apr. 21, Treating [peat, &c.
 — E., 4304, Dec. 11, Axle bearings of coal tubs.
 Baird, J., & Brown, J. F., 258, Jan. 23, Weaving.
 Bairnsfather, S., 613, Feb. 19, Signalling on railways.
 Baker, D., 1577, Apr. 29, Mariners' compasses.
 — J. M. B., 86, Jan. 9, Drying steam-boilers.
 — F. R., 3567, Oct. 14, Spools or reels.
 — G., 3566, Oct. 14, Wire lattice work and netting.
 — R., 62, Jan. 7, Jacquards.
 — T. H., & Forbes, D. W., 2766, Aug. 5, Drying [hops, malt, &c.
 — W., 327, Jan. 28, Purifying iron.
 — W., 3331, Sep. 23, Skates.
 Bakers, L., 4543, Dec. 30, Roller skates.
 Bale, W. E., & West, W., 3745, Oct. 28, Fleshing machines.
 Balestrieri, P. (Clark), 89, Jan. 9, Collecting rays of [light and heat.
 Balfour, A. J., Hamilton, J. B., Wade, G. E., & Okes-Voysey, [R. W., 1585, Apr. 29, Musical instruments.
 Ball, C. J., & Richardson, J., 564, Feb. 16, Steam- [engine and air compressor.
 — E. W., 2187, June 15, Locking screw-nuts.
 Ball, P., & Fitts, B. (Newton), 1440, Apr. 20, Water- [meters.
 Ballardie, D., & Campbell, D. Mac I., 4365, Dec. 16, Ships.
 Ballin, C. C. (Browne), 1934, May 26, Artificial foliage.
 Balmforth, V. V. (Lake), 1822, May 15, Button-hole [casings.
 Balshaw, J. A., 834, Mar. 6, Gloves.
 Bancroft, J. S., & Orr, W. (Newton), 3711, Oct. 26 [Padlocks.
 Banford, J. W., 946, Mar. 13, Cases for pipes, cigars, &c.
 Banks, J., & Booth, J., 1649, May 4, Looms.
 Bannehr, J., 4122, Nov. 27, Intercepting and treating [sewage.
 Banner, E. G., 2401, July 2, House traps for drains, &c.
 Bannister, R. D., & Milligan, S. (Lake), 2245, June 18 [Advertising.
 Bañolas, R. (Johnson), 138, Jan. 13, Extinguishing fires.

- Bañolas, R., & Carlier, V. J.* (Johnson), 1002, Mar. 18, [Railways and tramways].
 — *R., & Carlier, V. J.* (Johnson), 1023, Mar. 19, [Railways and tramways].
Barba, F. J. (Johnson), 3415, Oct. 1, Screw-bolts, &c.
Barber, T. W., 4553, Dec. 31, Pipe organs.
Barbour, J., 3422, Oct. 1, Treating fibres.
Barclay, G., & Kennedy, J. (Pellow), 3295, Sep. 21, [Horse-rakes].
Barclay, R., 2201, June 15, Tramway cars & steam-boilers.
 — *R.*, 2590, July 20, Printing and fixing impressions on metal plates.
 — *R., Fry, J. D., & Baber, H.*, 1168, Mar. 31, [Printing on metal plates].
Bardell, J., & Blakemore, E., 3780, Oct. 30, Fire-arms.
Barennes, A. (Gedge), 3216, Sep. 14, Horse-shoe.
Barker, A., 3329, Sep. 23, Brushes, mops, &c.
Barker, A. (Alexander), 1633, May 3, Railway breaks.
Barker, James, J. & T., 4159, Dec. 1, Hoists or cranes.
 — *John*, 432, Feb. 5, Hoists or cranes.
 — *John, J. & T.*, 4159, Dec. 1, Hoists or cranes.
 — *T., J. & J.*, 4159, Dec. 1, Hoists or cranes.
 — *W. R.*, 1152, Mar. 30, Medicinal discs.
 — *W. R.*, 1154, Mar. 31, Farinaceous compounds.
Barlow, A., 2948, Aug. 21, Shaft revolution indicators.
 — *H. B. (Stratton)*, 407, Feb. 3, Indicating water-level, &c.
 — *H. B. (Deck)*, 1277, Apr. 8, Motive-power, [pumping, &c.].
 — *H. B. (Stratton)*, 1528, Apr. 26, Heating feed-water.
 — *H. B. (Genies)*, 2069, June 5, Axle boxes.
 — *H. B. (Saxon Machine Works)*, 2445, July 7, [Burring fibres].
 — *H. B. (Torlotin)*, 3015, Aug. 27, Size for yarns, &c.
 — *H. B. (Galland)*, 4079, Nov. 24, Beer.
 — *H. B. (Galland)*, 4418, Dec. 21, Filters.
 — *H. B., & Goldsworthy, R. B.*, 2763, Aug. 5, [Communicating motion; grinding and polishing].
Barnard, B., 4347, Dec. 15, Sliding windows, shutters [and doors].
 — *T. J.*, 2512, July 13, Calcination and chlorination of ores.
Barnes, A. E. (Weldhen), 2008, June 1, Furniture.
Barnes, C. J., 3829, Nov. 4, Protectors for thrashing-machines.
Barnes, E., & Binns, E. (Abel), 1898, May 24, Shovels, [spades, &c.].
Barnett, A. F., 3651, Oct. 21, Oakum picking.
 — *F.*, 3620, Oct. 19, Bridges.
 — *J., & Zieschang, B.*, 1396, Apr. 16, Cartridges.
 — *S.*, 2616, July 23, Controlling, &c. discharge of [fluids].
Barnicoat, W., 3163, Sep. 9, Levelling instruments.
Barr, A., 3581, Oct. 15, Mincing meat, &c.
Barrett, J., 4511, Dec. 28, Carts.
Barron, H. S., 3658, Oct. 21, Steam-generators.
 — *W. S., & Britten, F. J.*, 118, Jan. 12, Centrifugal [apparatus].
Barrow, J., 3675, Oct. 22, Applying india-rubber to [fabrics; dealing with vapours in process].
Bartels, G. C. F., & Freise, E. F. (Hughes), 1764, [May 11, Dyeing].
Barthe, G., & Co. (Clark), 4505, Dec. 24, Cattle-food.
Bartleet, G. A. (Chambers), 2458, July 8, Washing and [dyeing fibres, &c.].
 — *R. S., & Johnson, W.*, 4048, Nov. 22, Sewing-machine needles, &c.
Bartlett, F. W. (Lake), 3294, Sep. 20, Ozon.
Bartlett, J., & Murray, W. M., 1746, May 11, Printing; type.
Barton, J., 4547, Dec. 30, Letter-copying presses.
 — *J. S.*, 2789, Aug. 7, Steam-generators and valves.
 — *W., & Hare, G. S.*, 1385, Apr. 16, Lubricators.
Barton, W. W., 1391, Apr. 16, Cultivator.
Bartrum, W. E., & Powell, H. C., 3316, Sep. 22, Rotary-engines, pumps or meters.
Bash, S., 1257, Apr. 7, Winding yarns.
Bastie, F. B. A. Royer de la, 2157, June 12, Tempering glass.
Batchelar, A., 2299, June 23, Burning bricks, pottery, &c.
Bate, D., & Bryan, T. M., 4282, Dec. 10, Reducing concussion, &c. of millstones.
 — *J., Lawrence, J., & Follows, F. W.*, 3288, Sep. 20, [Cutting grass edges; knife-cleaning machines].
Bateman, H., 919, Mar. 12, Corkscrews.
Bates, C. E., & Money, E., 3995, Nov. 17, Advertising.
 — *E., & Thornton, R. S.*, 2612, July 22, Nails.
Bates, F. L. (Clark), 1639, May 3, Locking screw-nuts.
Bates, G., 660, Feb. 23, Attaching cocks, &c., to pipes.
Bates, G. A., & Smith, S. (Hughes), 2083, June 5, Heating air; ventilating.
Bath, J., 369, Feb. 1, Coupling railway carriages.
Batho, W. F., & Hanson, J. T., 3005, Aug. 26, Wall-papers.
 — *W. F., & Bruce, W. D.*, 4217, Dec. 6, Dredgers.
Batt, H., 2810, Aug. 10, Hoisting &c. building materials.
 — *S. & T.*, 1325, Apr. 12, Chimney tops.
 — *T. & S.*, 1325, Apr. 12, Chimney tops.
Battersby, J., & Wilson, W., 375, Feb. 2, Cutting roots.
Batty, W. 1000, Mar. 18, Invalid urinals.
Baudot, J. M. E., 3096, Sep. 3, Electric-telegraphs.
Bauer, O. (Wise), 3195, Sep. 11, Plaits or folds.
 — *O. (Wise)*, 3207, Sep. 13, Plaits or folds.
Baumotte, H. (Jensen), 494, Feb. 10, Painters' easels.
Baxter, H., Rushworth, L., & Clough, H., 2714, July 31, [Spinning].
Bayford, W. J., 3071, Sep. 1, Hydraulic pumps.
Bayley, E. H., 1447, Apr. 21, Water-carts or wagons.
 — *E. H.*, 2308, June 24, Clearing streets from mud, &c.
Baylis, C., 3475, Oct. 6, Relieving traffic on bridges.
Bayliss, M., & Jones, E., 174, Jan. 16, Nuts and washers.
Bazelaire, E., 3693, Oct. 25, Locking or fastening.
Bazelarie, E. (Dufrené), 1527, Apr. 26, Locking or [fastening].
Bazley, C. H., 1769, May 12, Preparing fibres for spinning.
Beach, H., 2994, Aug. 26, High-pressure water-taps.
Beal, J., & Gratton, T., 1624, May 3, Locomotive, &c. [engines].
Beamish, A., & Mason, C., 3065, Sep. 1, Preventing [radiation of heat].
Bear, J., 1425, Apr. 19, Cigars.
Beard, A., & Brown, T., 4449, Dec. 22, Wheels.
Beardsley, G., 2644, July 26, Lace machines for making [woven fabrics].
Beatley, J. W. (Lake), 4117, Nov. 26, Gas.
Beattie, R., & Blair, R., 13, Jan. 1, Sewing-machines.
 — *W. G.*, 2792, Aug. 7, Axle-boxes.
 — *W. G.*, 2838, Aug. 12, Slide-valves and pistons.
Beaumont, F. & W. H. (Clark), 3527, Oct. 11, Stilt.
Beaumont, F. E. B., 829, Mar. 6, Percussive rock-drills.
 — *F. E. B.*, 3079, Sep. 2, Indicating, &c. speed [of carriages].
 — *F. E. B.*, 4166, Dec. 2, Tunnelling machinery.
 — *F. E. B., & Pilkington, W.*, 4196, Dec. 4, [Roller skates].
 — *G.*, 823, Mar. 5, Fittings of window sashes.
Beaumont, W. H. & F. (Clark), 3527, Oct. 11, Stilt.
Beavan, A. H., 1858, May 20, Trucks for cattle, &c.
Bebbington, G., 2863, Aug. 13, Reeling, coiling and wetting [paper].
Bechtold, M., 4201, Dec. 4, Purse mounts.
Beck, John, & Blakeborough, R., 227, Jan. 21, Hydrants [and fire-cocks].
 — *Joseph (Queen & Co.)*, 689, Feb. 25, Prism.
 — *W.*, 4253, Dec. 8, Brickmaking.
 — *W. H. (Steinbach & Co.)*, 394, Feb. 3, Saddle girths.
 — *W. H. (Steinbach & Co.)*, 2723, Aug. 2, Saddle girths.

- Beck, W. H., & Richardson, C., 1650, May 4, Looms.
 Beckwith, J. H., & Galloway, C. J., 2881, Aug. 16, Fixing [boiler tubes].
 Bedford, J., 2404, July 2, Grinding corn.
 Beech, E., 1384, Apr. 16, Printing.
 Beeston, E., 1570, Apr. 29, Cracking nuts, &c.
 Behrens, J. (Caro), 1868, May 21, Treating wool.
 Bejar y O'Lawlor, L. M. de, & Calvo, N. A., 2101, June 8, [Telegraphy].
 Belcher, H., 2728, Aug. 3, Umbrellas and sunshades.
 Beldam, W. A., Allibon, G., & Manbré, A., 264, Jan. 23, [Steam-boilers].
 Bell, A. P., & Thorp, T., 3303, Sep. 21, Lighting gas.
 — H., 799, Mar. 4, Nails and tacks.
 — I. L., 3778, Oct. 30, Iron.
 — J. M., 565, Feb. 16, Stands for holding books, &c.
 — R., 4105, Nov. 26, Blacking.
 — V. G., 4261, Dec. 8, Ventilating railway tunnels.
 — W., 3606, Oct. 18, Washing-machines.
 Bellamy, T. H., 2094, June 7, Agricultural drills.
 Bellini, H. L., 3215, Sep. 14, Ceilings.
 Belvallette, A. (Wise), 3754, Oct. 28, Arranging seats in [vessels to prevent sickness].
 Benda, G., 3672, Oct. 22, Rolled bar-iron.
 Bénic, F. C. E. M., 2409, July 3, Ships.
 Benjumea, N. D., 2914, Aug. 18, Transmitting the voice.
 Bennett, A., 1169, Mar. 31, Galvanic-batteries.
 — Francis G., 168, Jan. 15, Roller skates.
 — Frederick, 1426, Apr. 19, Producing patterns in [metals, on cloth, &c].
 — Frederick, 1428, Apr. 19, Printing cloth or fabrics.
 — G. T., 4128, Nov. 29, Governors.
 Bennett, J., & Hart, G. W., 1976, May 29, Alkalies & acids.
 — J. G. (Haseltine), 2253, June 19, Targets.
 Bennett, J. T. B., 3850, Nov. 5, Retorts.
 Bennie, G., 3934, Nov. 12, Retorts.
 Bennis, E., 1308, Apr. 10, Feeding furnaces.
 Benson, M. (Redheffer), 388, Feb. 3, Freezing, churning, &c.
 — M. (Williams), 437, Feb. 5, Boots and lasts.
 — M. (Wicks), 1139, Mar. 30, Looms.
 — M. (Wicks), 1199, Apr. 2, Pattern chains for looms.
 — M. (Wicks), 3537, Oct. 12, Doubling & twisting.
 — M. (Cope & Maxwell), 3598, Oct. 16, Steam [pumping or air-compressing engines].
 — M. (Crosby & McCabe), 4032, Nov. 20, Cleaning [steam-boiler flues].
 — M. (Olmsted), 4482, Dec. 24, Telegraphs.
 Benton, W., 1935, May 27, Smoothing irons.
 Benwell, R., & Humphreys, G. (Alexander), 196, Jan. 19, [Bale-bands].
 Berdan, H. (Johnson), 1910, May 25, Measuring distances.
 Bergius, M. E. (Hughes), 1595, Apr. 30, Treating slag.
 Bergue, R. de (Walker), 2100, June 8, Burning hydro- [carbons in furnaces, &c].
 — R. de (Walker), 4241, Dec. 7, Burning hydro- [carbons in furnaces, &c., and for smelting].
 Berkemyer, X., 673, Feb. 24, Coats.
 Berman, E., 2185, June 14, Buttons.
 Berrens, H. (Newton), 894, Mar. 10, Extracting mer- [cury, &c. from ores].
 Berry, T., & Livesey, E., 2273, June 22, Mowing and [reaping].
 — W. H., & Booth, C. H., 980, Mar. 17, Railway and [other wheels].
 — W. H., New, A. J., & Matthews, R. A., 2301, [June 23, Lathes, &c].
 — W. H., New, A. J., & Matthews, R. A., 4273, Dec. 9, [Tool-holders and cutting tools].
 — W. S., & Smith, W. J., 2327, June 26, Dyeing.
 — W. S., & Jackson, J. S., 3544, Oct. 12, Woven [fabrics].
 Bert, J. F. le (Clark), 3882, Nov. 8, Fire-arms.
 Bert, J. F. le, & Delsarte, H. A. (Clark), 2876, Aug. 14, [Fire-arms].
 Bertin, E. (Clark), 4311, Dec. 11, Dynamo & magneto- [electric machines].
 Bertot, J. H. (Wise), 899, Mar. 11, Propelling.
 Bertram, L. B., 2375, June 30, Damping copying paper.
 Besançon, C., 1951, May 27, Spring button link.
 Bessemer, H., 4552, Dec. 31, Reflectors, lenses, &c.
 Best, A., 1150, Mar. 30, Game registers.
 — I., & Whitehead, T., 1480, Apr. 22, Combing machines.
 Betley, R. & Wolff, J., 2421, July 5, Aniline dyes.
 — R. & Wolff, J., 2448, July 7, Naphthaline dyes.
 Betteley, J., 2127, June 10, Passenger vessels, &c.
 — J., 3997, Nov. 17, Ships and boats.
 Bevan, R., 3271, Sep. 18, Motive-power.
 Beverley, T. W., 1045, Mar. 22, Lathes.
 — T. W., 3694, Oct. 25, Radial drills.
 Bewsher, J., 339, Jan. 28, Printing.
 Beynon, G. W., 3113, Sep. 4, Tools for operating on [metals, &c].
 Bickerton, J., & Wormald, J., 4492, Dec. 24, Dissolving [snow].
 — Ralph & R., 2686, July 29, Thinning, &c. tur- [nips].
 — Richard & R., 2686, July 29, Thinning, &c. [turnips].
 Bicknell, E. J., Westcott, N. W., Spencer, C. L., & Hail, [N.B. (Lake), 3000, Aug. 26, Knitting].
 Biddell, G. A., 3642, Oct. 20, Railways.
 Biddle, D., 2901, Aug. 17, Steering balloons.
 Bigelow, E. B. (Bousfield), 2764, Aug. 5, Looms for pile [fabrics].
 — E. B. (Bousfield), 3124, Sep. 6, Carpet looms.
 Bilbrough, A., 1564, Apr. 28, Locks for carriage doors.
 Billet, A., 2919, Aug. 19, Electric telegraphs.
 Billings, G. W. (Lake), 3244, Sep. 16, Compressing and [reducing steel ingots, &c].
 Billington, T., & Darbyshire, C., 2709, July 31, Moulding [toothed wheels, &c].
 Bingham, E. W. (Haseltine), 1182, Apr. 1, Burning [bricks, &c].
 Bingham, T. R. D., 4557, Dec. 31, Paddle-wheels.
 Binko, H. B., 948, Mar. 13, Label dampers, &c.
 Binns, E., & Barnes, E. (Abel), 1898, May 24, Shovels, [spades, &c].
 Binns, L., 335, Jan. 28, Mounting driving bands.
 — L., 1037, Mar. 20, Bands, cords, or ropes.
 — T. S., & Owen, J., 1312, Apr. 10, Chains.
 Birkby, R., 3792, Nov. 1, Cupolas.
 Birkhead, C. N., 3981, Nov. 16, "Willeys" or "teazers."
 Birley, S., & Smythe, E., 2988, Aug. 26, Producing loco- [motion in vehicles].
 Birnbaum, B., 1062, Mar. 23, Tobacco pouches.
 Birrell, W., 2604, July 21, Regulating pressure of gases, &c.
 Bishop, G. (Knip), 403, Feb. 3, Exhibiting pictures.
 Bishop, G. H., & Bishop, T. B., 2920, Aug. 19, Sewing- [machine appliances].
 Bishop, T. B., & Bishop, G. H., 2920, Aug. 19, Sewing- [machine appliances].
 Bisschop, A. de (Alexander), 4342, Dec. 15, Gas-engines.
 Bjorkman, E. A. (Nordenfeldt), 2459, July 8, Explosive [compounds].
 Black, G., 1751, May 11, Sweeping chimneys, &c.
 Blackburn, B., Parkinson, R., & Catlow, S., 720, Feb. 26, [Mules].
 — J., & Vivian, J., 891, Mar. 10, Hoists.
 — R., & Odams, J., 2358, June 29, Treating sewage.
 — W., & Shaw, T., 3955, Nov. 13, Dry soap.
 Blacklock, J. A., & Appleford, W. G., 3546, Oct. 12, [Sewing-machines].
 Blades, W. W., 1203, Apr. 2, Railway brakes.
 Blain, J., 278, Jan. 25, Fire-extinguisher.

- Blair, R., & Benthie, R., 12, Jan. 1, Sewing-machines.
 — R., & Turnbull, J. A. 4277, Dec. 9, Sagar.
 Blake, G. P., (Lake), 2847, Aug. 12, Cleansing upholstery, fabrics, wool, &c.
 Blake, J., 1207, Apr. 2, Steam-generators.
 Blake, J. G., Fulton, H. H., & Weston, W. S. (Lake), 1613, May 1, Writing desks or tables.
 Blake, J. W. (Hall), 2026, June 2, Steam-pumps.
 — J. W. (Ingersoll), 4207, Dec. 6, Boring rock, &c.
 Blake, J. W., (Johnson), 3678, Oct. 22, Grinding and polishing.
 — J. W., (Neuhans & Hodgkin), 3867, Nov. 6, Steam-pumps.
 — L. R., & Gardner, C. F., 206, Jan. 19, Boots & shoes.
 — T. J. (Abel), 1829, May 18, Spades, &c.
 Blake, W., Shaw, J. W., & Fulton, E., 4014, Nov. 19, Packing cases.
 — W. A., 2490, July 10, Washing machines.
 — W. A., & Moss, G., 883, Mar. 10, Sewing-machines.
 — W. A., & Moss, G., 3520, Oct. 11, Sewing-machines, shuttles, and bobbins.
 Blakeborough, R., & Beck, J., 227, Jan. 21, Hydrants and fire-cocks.
 Blakemore, E., & Bardell, J., 3780, Oct. 30, Fire-arms.
 Blakey, J., 4142, Nov. 30, Boot-trees.
 Blamires, T. H., & Oldroyd, J., 1427, Apr. 19, Waddings and felted fabrics.
 — T. H., & Oldroyd, J., 2858, Aug. 13, Waddings and felted fabrics.
 Blanche, A. H., 4009, Nov. 18, Singeing fabrics.
 Blanchfield, T., 3799, Nov. 2, Umbrellas, parasols, &c.
 Bland, H., 978, Mar. 16, Working of railways.
 — H., 2368, June 29, Sewing-machines, &c.
 — H., 3242, Sep. 16, Working railways.
 — J. (Bland), 3406, Sep. 30, Raising sunken vessels.
 Bland, M. H. (Bland), 3406, Sep. 30, Raising sunken vessels.
 Blau, —, & Schirmer, — (Steiger), 1048, Mar. 22, Producing embroidery.
 Blencowe, E., 2606, July 22, Roller-blinds.
 Blewitt, R. J., 4302, Dec. 11, Coating metal with tin.
 — R. J., 4303, Dec. 11, Obtaining carburetted hydrogen, &c.
 Blezard, R., & Leicester, T., 3518, Oct. 11, Bolting, &c.
 — flour and middlings.
 Bliss, W. H., 3948, Nov. 12, Roller skates.
 Block, G. E., 718, Feb. 26, Artificial leather.
 Blockmans, C., & Charlet, G., 3004, Aug. 26, Steam-carriages.
 Bloomfield, H., & Ewer, E. de, 3250, Sep. 17, Gas.
 Blot, A. (Vaughan), 37, Jan. 4, Presses.
 Bluck, E., 72, Jan. 8, Railway carriages.
 Blumfeld, L. (Hecht & Co.), 4149, Dec. 1, Pipes and tubes for smoking.
 Bluntschli, F. C., & Reishauer, G. G. (Abel), 2172, June 14, Bending railway rails.
 Blyth, S. W., 2708, July 30, Cultivating land.
 Boblique, L., Leplay, H., Box, J., & Aubertin, E., 181, Jan. 16, Phosphates and phosphorus.
 — L., Leplay, H., Box, J., & Aubertin, E., 214, Jan. 20, Disinfecting sewage, &c.
 Bockhacker, F. (Jensen), 1962, May 28, Weighing wool after washing.
 Bodel, L. G., Masse, J., & Webster, W., 1559, Apr. 28, Carriages, tricycles, &c.
 Boden, H., & Whitehurst, S., 3092, Sep. 3, Stopping carriages on rail or tramways.
 Bodmer, J. J. & L. R., 1054, Mar. 23, Treating slag & iron.
 — L. R. & J. J., 1054, Mar. 23, Treating slag & iron.
 Boethius, E. (Hald), 1390, Apr. 16, Cutting cork stoppers.
 Boetius, J. F., 1681, May 5, Hydraulic cranes.
 Boggett, W., 526, Feb. 12, Ornamental designs, &c.
 Boyle, A. (Lake), 395, Feb. 3, Brushing boots; polishing, &c. cutlery.
 Bahlken, A. (Jensen), 295, Jan. 26, Washing machine.
 — A. (Jensen), 307, Jan. 27, Earth-boring augers.
 Boire, E., 1022, Mar. 19, Steam-engines.
 Bois, A., 45, Jan. 5, Safety-guard for tram-cars, &c.
 Bois, P. N. de (Lake), 3646, Oct. 20, Lead traps.
 — P. N. de (Lake), 4026, Nov. 19, Plumbers' traps.
 Boissin, G. (Lake), 615, Feb. 19, Cutting leather, &c.
 — J. E. (Henderson), 3362, Sep. 25, Canopies or hoods.
 Bolitho, O. G., 1931, May 26, Breaks; signalling on trains.
 Bollé, C. F. H., 2257, June 21, Winding yarn or thread.
 Bollé, A. E. (Touaillon), 3521, Oct. 11, Steam carriage.
 Bollmann, L. (Badenberg), 1780, May 13, Emery wheels.
 Bolton, F., 2177, June 14, Index for meters.
 — F., 2266, June 21, Weighing-machines.
 — F., 4373, Dec. 17, Weighing and measuring liquids.
 Bomford, E. G. C., 817, Mar. 5, Reaping machine binders, &c.
 Bond, J., 2317, June 24, Block bushes and sheaves, &c.
 — R., & O'Neill, J., 1212, Apr. 3, Temples for looms.
 Bondi, C., 1075, Mar. 24, Signalling on railways.
 Bondi, C. (Gilbee), 3335, Sep. 24, Railway signals.
 Bone, W., 2692, July 29, Cleaning seeds.
 Bonnard, P. A. (Clark), 3162, Sep. 8, Treating sewage.
 Bonnefa, F. A. (Whitwham), 1195, Apr. 2, Treating excreta.
 Bonnefond, A., 46, Jan. 5, Water-meters.
 Bonner, J., 11, Jan. 1, Weaving.
 Bonneville, H. A. (Martin), 2, Jan. 1, Carding fibres.
 — H. A. (Martin), 777, Mar. 3, Spindle for spinning machines.
 — H. A. (Perlaux), 1514, Apr. 24, Preventing breakage of glass chimneys, &c.
 — H. A. (Unger), 1854, May 20, Propelling ships.
 — H. A. (Lesobre), 1937, May 27, Ovens.
 — H. A. (Boyle), 2395, July 1, Telegraphs.
 — H. A. (Martin), 2591, July 21, Spinning fibres.
 — H. A. (Richards), 2649, July 26, Type-setting machines.
 — H. A. (Legrand), 2759, Aug. 5, Railroads.
 — H. A. (Hornum, Hance, & Buckhout), 2760, Aug. 5, Fare registers.
 — H. A. (Duchesne), 3010, Aug. 27, Gas.
 — H. A. (Pichon), 3018, Aug. 27, Tobacco-box.
 — H. A. (Rousseau), 3522, Oct. 11, Casters.
 — H. A. (Charton), 3956, Nov. 13, Figured surfaces.
 — H. A. (Herbepin), 3978, Nov. 16, Measuring water.
 — H. A. (Grandjean), 4318, Dec. 13, Warming railway carriages.
 — H. A. (Grandjean), 4319, Dec. 13, Warming railway carriages, &c.
 — H. A. (Grandjean), 4510, Dec. 28, Warming carriages.
 — H. A. (Brown), 4537, Dec. 30, Caloric-engines.
 Bonniot, —, Pouget, —, & Febrre, V. (Clark), 4147, Nov. 30, Operating sewing-machines.
 Bontemps, P. (Clark), 99, Jan. 11, Hydrostatic motor.
 Boone, J. L., & Detrick, E., 2553, July 16, Sewing-machines.
 Boot & Shoe Tip Co., National (Morgan-Brown), 3895, Nov. 10, Shoe tips.
 Booth, C. H., & Berry, W. H., 980, Mar. 17, Railway and other wheels.
 — F., 1115, Mar. 27, Beer-engines or pumps.
 — G. H., 2867, Aug. 14, Envelopes.
 — G. J., 4332, Dec. 14, Leather driving bands.
 — H., & Watson, R., 1716, May 8, Utilising parts of halds.

Booth, J., & Banks, J., 1649, May 4, Looms.
 Borchardt, H. (Newton), 385, Feb. 2, Bullet patching [machinery].
 Bordat, C. L. J., Coinsin- (Clark), 2918, Aug. 18, [bleaching fibrous substances].
 Bordone, J. P. T., 4491, Dec. 24, Steam-boilers.
 Borland, J. (Borland), 3178, Sep. 10, Hydrocarbon furnaces; producing light and heat.
 Borland, R. B. (Borland), 3178, Sep. 10, Hydrocarbon [furnaces; producing light and heat].
 Borrett, W. G., & Hyde, T., 3691, Oct. 25, Lithographic [printing].
 Bosworth, J. A., 3473, Oct. 6, Making bore-holes for [wells, &c.].
 Bottomley, J., 3631, Oct. 20, Twisting yarns.
 Botton, F., & Manley, P., 2585, July 20, Mowing & reaping.
 Bottone, N., 2361, June 29, Calculating apparatus.
 Bouchotte, E. S. (Henry), 1145, Mar. 30, Grinding corn.
 Boucley, P., 451, Feb. 6, Straps, bands, harness, &c.
 Boudin, L. J. (Johnson), 2183, June 14, Wrenches or [spanners].
 Bouhon, C. (Auchinvole), 2713, July 31, Recovering [indigo from fabrics, &c.].
 Bouilliant, L. A. (Lake), 1033, Mar. 20, Scaffold poles.
 Boulcott, J. R., 4497, Dec. 24, Diving apparatus.
 Boullelot, A. B. (Edwards), 75, Jan. 8, Safety-lamps.
 Boulton, J., 311, Jan. 27, Railway signalling.
 — M. P. W., 96, Jan. 11, Hot-gas & steam-engines.
 — M. P. W., 574, Feb. 17, Fluid-engines.
 — M. P. W., 680, Feb. 24, Generating steam.
 — M. P. W., 694, Feb. 25, Condensing steam.
 — M. P. W., & Imray, J., 2320, June 25, Helical [pumps].
 — W., 3980, Nov. 16, Pottery; bricks and tiles.
 — W., 4170, Dec. 2, Grinding pottery materials.
 Bourry, E. A., 3411, Oct. 1, Connecting pipes, &c.
 Bousfield, E. T., & Howard, J., 1024, Mar. 19, Steam [cultivators].
 — E. T., & Howard, J., 1603, Apr. 30, Furnaces.
 — E. T., & Howard, J., 2363, June 29, Horse- [rakes].
 — G. T. (Heaton), 18, Jan. 1, Button fasteners.
 — G. T. (Société Anonyme du Cuivre Français), [2042, June 3, Protosulphuret of iron and [hydrogen gas].
 — G. T. (Société Anonyme du Cuivre Français), [2084, June 5, Kilns or ovens].
 — G. T. (Iles), 2309, June 24, Adjusting mag- [netic needles].
 — G. T. (Scholes & Couper), 2482, July 9, [Rubber belting].
 — G. T. (Kohrig & Pzillas), 2486, July 10, Sugar.
 — G. T. (Bigelow), 2764, Aug. 5, Looms for [pile fabrics].
 — G. T. (Rodolphe), 2987, Aug. 25, Rifling [fire-arms].
 — G. T. (Bigelow), 3124, Sep. 6, Carpet looms.
 — G. T. (Heaton), 3686, Oct. 23, Instrument for [attaching buttons].
 — G. T. (Société Anonyme du Cuivre Français), [3870, Nov. 6, Precipitating copper, &c.].
 — G. T. (Leprince, Roy, & Co.), 4272, Dec. 9, [Pistons].
 Bow, W., 3927, Nov. 11, Steam-steering apparatus.
 Bowens, F. de, 2900, Aug. 17, Match-splints.
 Bowing, J., 2423, July 5, Cements.
 — J., 3989, Nov. 17, Filter-presses.
 Bowker, W., 958, Mar. 15, Taking up, letting off, and feed [motions].
 Bowles, J. A., 1402, Apr. 17, Roller skates.
 — J. A., 1403, Apr. 17, Roller skates.
 — J. A., 2852, Aug. 13, Roller skates.

Bowman, J., 53, Jan. 6, Bottles and stoppers.
 Box, J., Aubertin, E., Boblique, L., & Leplay, H., 181, [Jan. 16, Phosphates and phosphorus].
 — J., Aubertin, E., Boblique, L., & Leplay, H., 214, [Jan. 20, Disinfecting sewage, &c.].
 Boyd, H. E. (Imray), 2737, Aug. 3, Cutting screw- [taps, &c.].
 Boyd, W., 3372, Sep. 27, Lighting and heating.
 Boyle, J., & Atterbury, G., 4210, Dec. 6, Steam-engine [furnaces].
 Boyle, R. K. (Bonneville), 2395, July 1, Telegraphs.
 Boyman, R. B., 67, Jan. 7, Rotary-engines.
 Boyns, J., 3418, Oct. 1, Stamping, pulverizing, &c., ores.
 Boyton, P., 1644, May 4, Floating garments.
 Braby, J., 2887, Aug. 16, Distributing manure, &c.
 Bradbury, C. T., & Gartside, J. H., 158, Jan. 15, Finish- [ing fabrics].
 — G. F., & Lomax, H., 2592, July 21, Sewing- [machines].
 — G. F., & Lomax, H., 3432, Oct. 2, Sewing- [machines].
 — G. F., & Lomax, H., 3653, Oct. 21, Sewing- [machines].
 — G. F. & J., 3800, Nov. 2, Working wood.
 — J. & G. F., 3800, Nov. 2, Working wood.
 Bradford, J. B., & Ferry, G. H. (Haseltine), 484, Feb. 9, [Filling and corking bottles].
 Bradford, T., 727, Feb. 27, Cutting, reducing, &c. bones.
 Bradley, C., & Campbell, J., 480, Feb. 9, Combing fibres.
 — C., & Cure, J., 1341, Apr. 13, Combing fibres.
 — G., & Madderson, T., 63, Jan. 7, Crushing ores, &c.
 — J., & Walbank, J., 389, Feb. 3, Spinning fibres.
 Bradshaw, E., 3410, Oct. 1, Raising sunken vessels.
 — J. B., 364, Jan. 30, Splaying hoops for casks.
 Bradsworth, A., & France, E., 2163, June 12, Elastic webs.
 Brae, J. A., 3276, Sep. 18, Pumps and engines.
 Brakell, C., 1393, Apr. 16, Motive-power; fluid-meters.
 Bramham, W., 869, Mar. 9, Drying white lead, &c.
 Branch, J. W. (Lake), 3677, Oct. 22, Diamond holders, [and fitting diamonds in same].
 Brandely, A. A., & Montaugé, R. E. (Tongue), 1477, [Apr. 22, Corks or stoppers].
 Brandon, D. H. (King), 1001, Mar. 18, Printing machines.
 Braun, O., 1278, Apr. 8, Separating bodies from gases.
 Bray, G., 2705, July 30, Pole heads for carriages.
 Bray, M. (Lake), 100, Jan. 12, Rivets; setting same.
 Brayshaw, T., 3618, Oct. 19, Metal rings.
 Brear, A., & Smith, F. S. (Hughes), 2262, June 21, [Grate-bars].
 Brearley, B. J., & Marsden, G. H., 4173, Dec. 2, Facing [stone].
 Breeden, J., 1209, Apr. 3, Chandeliers and gasaliers.
 Bremerkamp, C., 2206, June 16, Stripping osiers, &c.
 Brennand, J., 1839, May 19, Colors for dyeing, &c.
 Brentnall, S., & Raworth, J. S., 3425, Oct. 2, Beetling, [&c., fabrics].
 Bresson, A., 4296, Dec. 11, Benzine, light oil, and [anthracene].
 Bret, B. le (Gedge), 2472, July 9, Signalling on trains.
 Brewer, E. G. (Müller), 758, Mar. 2, Railway couplings.
 — E. G. (Draper), 1122, Mar. 27, Sewing-machine [tables].
 — E. G. (Selten), 2567, July 19, Signalling.
 — E. G. (Loeb), 2626, July 23, Mixing gas-pro- [ducing agents for "extinctors."].
 — E. G. (Dumont-Catelain), 2687, July 29, Clean- [ing boots and shoes].
 — E. G. (Kosloff), 2767, Aug. 5, Electric-light.
 — E. G. (Van Gölpen, Lensing & Von Gimborn), [2817, Aug. 11, Caloric motor].
 — E. G. (Egasse & Co.), 2911, Aug. 18, Disinfectant.
 — E. G. (Hennessy), 3078, Sep. 1, Safe time locks.

- Brewer, E. G. (*Aubert*), 3120, Sep. 6, Preserving alimentary substances.
 — E. G. (*Loeb*), 3701, Oct. 25, Enabling persons [to enter smoke filled places, & lanterns for same].
 — E. G. (*Muchin*), 4464, Dec. 23, Bricks and tiles.
 Brewster, J., & Mace, C., 3871, Nov. 6, Tube stoppers.
 Bricquar, J. F. A. le (*Espir*), 291, Jan. 26, Mining powder.
 Bridgett, G. A., 3028, Aug. 28, Steam or air-engines for [pumping, &c].
 — W., & Sylvester, J., 2571, July 19, Lace-making.
 Briebach, J. A., 313, Jan. 27, Indicating position of rudders.
 Briere, J. (*Vaughan*), 1004, Mar. 18, Feeding-bottles.
 Brierley, F. W., W. W. & J., & Reynolds, F. S., 201, [Jan. 19, Railway signals and points].
 — F. W., W. W. & J., & Reynolds, F. S., 1284, [Apr. 9, Railway points and switches].
 — F. W., W. W. & J., & Reynolds, F. S., 2028, [June 2, Railway points and switch bars].
 — F. W., W. W. & J., & Reynolds, F. S., 2118, [June 9, Railway signals].
 — F. W., W. W. & J., 4180, Dec. 2, Removing [obstructions from railway points].
 — G., & Yates, R., 4488, Dec. 24, Looms.
 — J., F. W. & W. W., & Reynolds, F. S., 201, [Jan. 19, Railway signals and points].
 — J., F. W. & W. W., & Reynolds, F. S., 1284, [Apr. 9, Railway points and switches].
 — J., F. W. & W. W., & Reynolds, F. S., 2028, [June 2, Railway points and switch bars].
 — J., F. W. & W. W., & Reynolds, F. S., 2118, [June 9, Railway signals].
 — J., F. W. & W. W., 4180, Dec. 2, Removing [obstructions from railway points].
 — S., 2800, Aug. 9, Utilising heat from kilns, &c.
 — W. W., J. & F. W., & Reynolds, F. S., 201, [Jan. 19, Railway signals and points].
 — W. W., J. & F. W., & Reynolds, F. S., 1284, [Apr. 9, Railway points and switches].
 — W. W., J. & F. W., & Reynolds, F. S., 2028, [June 2, Railway points and switch bars].
 — W. W., J. & F. W., & Reynolds, F. S., 2118, [June 9, Railway signals].
 — W. W., J. & F. W., 4180, Dec. 2, Removing [obstructions from railway points].
 Brigg, C. & T. H., & Broughton, T., 757, Mar. 2, Spinning, &c. fibres.
 — T. H. & C., & Broughton, T., 757, Mar. 2, Spinning, &c. fibres.
 Briggs, G., & Stead, H., 1537, Apr. 27, Singeing yarns, &c.
 — H. B., 2197, June 15, Refining oils.
 Brin, Q. L., 3274, Sep. 18, Motive-power.
 Brinsmead, H., 119, Jan. 12, Rotary screens.
 — H., 2952, Aug. 23, Rotary screens.
 — H., 3700, Oct. 25, Thrashing-machines.
 Britten, B., 4017, Nov. 19, Glass.
 — F. J., & Barron, W. S., 118, Jan. 12, Centrifugal [apparatus].
 — J., 4450, Dec. 22, Checking receipt of money.
 Britton, B. F., (*Copland*), 1097, Mar. 25, Combs.
 Broadbent, T., 1144, Mar. 30, Hydro-extractors.
 — T., & Westerby, J., 231, Jan. 21, Valves.
 — T., & Brown, D., 4274, Dec. 9, Extracting [liquid from hops].
 Broadbridge, S. (*Andrews*), 4183, Dec. 3, Tables.
 Broadfoot, J., 507, Feb. 11, Waterclosets.
 Broadhurst, H. T., 2895, Aug. 17, Fancy weaving.
 Broadwell, L. W., 2754, Aug. 4, Projectiles.
 Brock, C., 2282, June 22, Mural fresco paintings, &c.
 — C. T., 247, Jan. 22, Displaying fireworks.
 — J., 1502, Apr. 23, Chloride of sodium, &c.; sulphate of soda, &c.
 Brockbank, G. H., 315, Jan. 27, Pianofortes.
 Brockell, W., 2298, June 23, Collar stud & cravat fastener.
 Brodie, W., Wilson, M., McLay, J. C. S., & Warren, F. P., [76, Jan. 8, Railway wheels and axles].
 Brodribb, W. A., 2254, June 19, Controlling horses, &c.
 Broedel, E., & Schuehardt, C., 3346, Sep. 24, Locks.
 Bromilow, J., 4182, Dec. 3, Steel; blast-furnaces.
 Brook, W. P., & Wilson, M., 344, Jan. 29, Cooking.
 Brookes, H., 4070, Nov. 23, Ships or vessels of war, &c.
 — I., & Heppenstall, W., 2719, July 31, Feeding [young animals].
 — W. (*Hobbs & Orcutt*), 125, Jan. 13, Cartridges.
 — W. (*Durrande*), 865, Mar. 9, Sleeve buttons, &c.
 — W. (*Hoyois*), 1223, Apr. 5, Steam-engines.
 — W. (*Farjon*), 1994, June 1, Controlling flow of [water, &c].
 — W. (*Fitt*), 2194, June 15, Watches, chronometers, &c.
 — W. (*Du Rieux*), 2412, July 3, Gas.
 — W. (*Wattinne & Roettger*), 3836, Nov. 4, Filed [fabrics].
 Brooks, G. J. (*Newton*), 2150, June 11, Metal tubes, &c.
 Brooks, H., 475, Feb. 9, Inkstands.
 — H., 476, Feb. 9, Call or signal bell apparatus.
 — H., 1593, Apr. 30, Bottles, &c.; discharging liquids.
 Brooks, J. S. (*Lake*), 2168, June 12, Electrotypes shells.
 — J. W. (*Morgan-Brown*), 2889, Aug. 17, Attaching, &c. heels to boots.
 Brotherhood, P., 999, Mar. 18, Forcing fluids, &c.
 — P., 4230, Dec. 7, Steering apparatus.
 — P., 4546, Dec. 30, Motor-engines.
 Brothers, C. & F. W., 2381, June 30, Gas.
 — F. W. & C., 2381, June 30, Gas.
 — F. W., & Paterson, R. O., 2880, Aug. 16, Salts [of ammonia].
 Brough, H., & Owens, J. F., 1205, Apr. 3, Fire-alarms.
 Broughton, T., & Brigg, C. & T. H., 757, Mar. 2, Spinning, &c. fibres.
 Brown, Andrew, & Simons, W., 3488, Oct. 8, Dredgers.
 — Andrew B., 1607, May 1, Punching, &c. boiler plates.
 — Andrew B., 3593, Oct. 6, Actuating stage effects; [ventilating; extinguishing fires].
 — Archibald, 4094, Nov. 25, Ornamenting clan [tartan and fancy wood-work].
 — C., 3719, Oct. 27, Musical instruments.
 — Daniel, 4005, Nov. 18, Stoppering bottles.
 — David, 2443, July 7, Life-boat rafts.
 — David, & Broadbent, T., 4274, Dec. 9, Extracting [liquid from hops].
 — E., 3097, Sep. 3, Warming, &c. railway carriages.
 Brown, F. (*Lake*), 3861, Nov. 5, Fog-horns.
 — F. (*Bonneville*), 4537, Dec. 30, Caloric-engines.
 Brown, G. E., 1643, May 3, Gathering, &c. cut crops.
 — G. L., 836, Mar. 6, Piling cloths, &c.
 — H., 1701, May 7, Using inflammable fluids for [heating, &c].
 — H. T., 1806, May 14, Recovering brewers' wort, &c.
 — Jacob, & Jacob, L., 1647, May 4, Solitaires, &c.
 — James F., 2654, July 27, Weaving.
 — James F., & Baird, J., 258, Jan. 23, Weaving.
 — James W., & Allan, G., 525, Feb. 12, Telegraphs.
 — John, 549, Feb. 15, Confectionery.
 — John H., 3898, Nov. 10, Preventing sea-sickness, &c.
 — Joseph, 714, Feb. 26, Copper plates for printing, &c.
 — Joseph, 3454, Oct. 5, Tobacco-pipes.
 — M. H., 352, Jan. 30, Fire-guards.
 — M. H., 1120, Mar. 27, Waterclosets; disinfecting, &c.
 — M. H., 2249, June 18, Life-raft, pontoon, and [life-boat].
 — N., 538, Feb. 13, Weighing-machines.
 — Richard, & Young, W., 3887, Nov. 9, Cutting [stone, marble, slate, &c].

Brown, Robert, 1065, Mar. 23, Candlesticks.
 — Robert, 1275, Apr. 8, Metal plates for printing, &c.
 — Robert, 1280, Apr. 8, Tramway cars, &c.
 — T., 863, Mar. 9, Shafting picks, axes, &c.
 — T. (*Burleigh*), 1766, May 12, Rock-drills.
 — T. (*Bailly*), 4329, Dec. 14, Packing stuffing [boxes].
 — T., & Beard, A., 4449, Dec. 22, Wheels.
 — Brown, W. H. (Lake), 3611, Oct. 18, Raising coal, &c.
 — Brown, W. Morgan- (*Colaert*), 90, Jan. 9, Shutters and [windows].
 — W. Morgan- (*Crompton*), 146, Jan. 14, Looms.
 — W. Morgan- (*Viglino & Donna*), 626, Feb. 20, [Motive-power].
 — W. Morgan- (*Verdier*), 654, Feb. 23, Treating [peat].
 — W. Morgan- (*Viglino & Donna*), 729, Feb. 27, [Railway axles].
 — W. Morgan- (*Doty*), 752, Mar. 2, Lamps.
 — W. Morgan- (*Hermagis*), 937, Mar. 13, Photo-graphic apparatus.
 — W. Morgan- (*Hagemann*), 964, Mar. 16, Water [or cascade air-pumps].
 — W. Morgan- (*Hagemann*), 965, Mar. 16, Evapor-ating fluids.
 — W. Morgan- (*Hedden & Hill*), 966, Mar. 16, Pho-tographic printing.
 — W. Morgan- (*Maitre*), 1110, Mar. 27, Yoking [horses].
 — W. Morgan- (*Harding & Johnson*), 1335, Apr. 13, [Treating sewage].
 — W. Morgan- (*Shuette*), 1865, May 21, Photometers.
 — W. Morgan- (*Crompton*), 1967, May 29, Boiler [anti-incrustation battery].
 — W. Morgan- (*Davis*), 2056, June 4, Composition [for destroying insects, worms, &c.].
 — W. Morgan- (*Harding & Johnson*), 2119, June 9, [Type-writing machines].
 — W. Morgan- (*Sommerfeldt & Nissen*), 2149, June 11, [Writing, &c. secret dispatches].
 — W. Morgan- (*Dodge*), 2200, June 15, Weaving [and waterproofing fabrics].
 — W. Morgan- (*Johnson & Harding*), 2250, June 19, [Tramway rolling stock].
 — W. Morgan- (*Ford & Dick*), 2261, June 21 [Suspending ships' berths, &c.].
 — W. Morgan- (*Sherman & Goldsmith*), 2345, June 28, [Pumps].
 — W. Morgan- (*Gear*), 2779, Aug. 6, Street railway [cars].
 — W. Morgan- (*Halsted*), 2790, Aug. 7, Spark [arresters, &c.].
 — W. Morgan- (*Brooks*), 2889, Aug. 17, Attaching [to &c. heels to boots].
 — W. Morgan- (*Goldsmith*), 2922, Aug. 19, Lubri-cating material.
 — W. Morgan- (*Elwert & Pack*), 3254, Sep. 17, [Ammoniacal salts].
 — W. Morgan- (*Giacomini*), 3880, Nov. 8, Carding [wool, &c.].
 — W. Morgan- (*Morse*), 3894, Nov. 10, Hose-pipe [couplings, &c.].
 — W. Morgan- (*National Boot and Shoe-Tip Co.*), [3895, Nov. 10, Shoe-tips].
 — W. Morgan- (*Dinsmore*), 3896, Nov. 10, Sewing-machines.
 — W. Morgan- (*Rousseau*), 3922, Nov. 11, American [organs].
 — W. Morgan- (*Stevens*), 4077, Nov. 24, Loom [shuttles; spindles].
 — W. Morgan- (*Guldbrandsen & Rettinger*), 4123, [Nov. 27, Glove sewing-machine.

Brown, W. Morgan- (*Duckerhoff*), 4155, Dec. 1, Explo-sive compounds.
 — W. Morgan- (*Hotchkiss*), 4220, Dec. 6, Fire-arms.
 — W. Morgan- (*Rose & Rose*), 4338, Dec. 15, [Cleaning grain].
 — W. Morgan- (*Midoz & Chanoit*), 4341, Dec. 15, [Filtering reservoir].
 — W. Morgan- (*Stacy*), 4483, Dec. 24, Gear tackle [for lifting, &c.].
 — Browne, A., 4299, Dec. 11, Exhibiting portraits, views, &c.
 — A. (*Foundries & Forges Co.*), 120, Jan. 12, [Converting iron scraps, &c. into steel].
 — A. (*Fletcher*), 578, Feb. 17, Screw-propellers.
 — A. (*Caillard & Caillard*), 1028, Mar. 19, Cranes.
 — A. (*Gravelaine-Malorey & Coly*), 1088, Mar. 25, [Purging steam-engine cylinders].
 — A. (*Ballin*), 1934, May 26, Artificial foliage.
 — A. (*Drevelle, Petitjean, & Labbe*), 2386, June 30, [Casters].
 — A. (*Manhes & Son*), 2849, Aug. 12, Refining [copper].
 — A. (*Husbands*), 2862, Aug. 13, Fire-lighters.
 — A. (*Demaret*), 3122, Sep. 6, Pianos & music [stands].
 — A. (*Chaine*), 3983, Nov. 16, Mechanical horse.
 — A. (*Kimball*), 3999, Nov. 18, Electro-magnetic [engines].
 — Browne, J. (Furrell), 241, Jan. 21, Stand for charts, &c.
 — Browne, R. J., 3673, Oct. 22, Propelling ships.
 — W. R., & Pinfold, J. G., 3696, Oct. 25, Steam-engines.
 — Brownhill, R. W., 4015, Nov. 19, Moulding bricks, fuel, &c.
 — R. W. & W., 3913, Nov. 11, Strip iron for tubes.
 — W. & R. W., 3913, Nov. 11, Strip iron for tubes.
 — W., & Smith, T. H., 3368, Sep. 27, Rolling [metals].
 — W., & Smith, T. H., 3577, Oct. 15, Welded [iron or other tubes].
 — W., & Smith, T. H., 3853, Nov. 5, Metal tubes.
 — Browning, G., 4387, Dec. 18, Sewing-machines.
 — J., 23, Jan. 2, Fastenings for doors, &c.
 — Brownlow, D. R., & Francis, G. W. (Lake), 340, Jan. 29, [Coating for metals].
 — Bruce, De V., & Antisell, T. M., 2016, June 2, Vapor-engines.
 — G. C., & Porteous, A. N., 3264, Sep. 18, Propelling [tramway cars, &c.].
 — W. D., & Batho, W. F., 4217, Dec. 6, Dredgers.
 — Brückner, W., & Holdorff, R. (Lake), 1313, Apr. 10, Hot [air-engines].
 — W., & Sachsenberg, G. (Morgan), 3794, Nov. 1, [Reducing ores, &c.].
 — Brühns, C. D. C. (Schallehn), 2442, July 6, Wire mat-resses and seats.
 — Brumleu, L., 1437, Apr. 20, White lead.
 — Brunius, H. (Vispé & Nisbeth), 1666, May 5, Signalling [on railways].
 — Brunner, W. G. (*Schnabel & Henning*), 505, Feb. 11, [Portable cranes].
 — Brunton, J. D., 702, Feb. 25, Dressing, &c. stone.
 — Bryan, T. M., & Bate, D., 4282, Dec. 10, Reducing con-cussion, &c., of millstones.
 — Bryett, W. N., 1453, Apr. 21, Iron chair bedsteads.
 — Buchan, P., 1398, Apr. 16, Collecting, &c. agricultural [produce].
 — W. P., 1499, Apr. 23, Ventilating water-traps.
 — W. P., 1662, May 4, Waterclosets.
 — Buchanan, T. R. (*Studwell*), 628, Feb. 30, Economising [fuel, &c. in steam-boilers].
 — Buchholz, J. A. A., 3107, Sep. 4, Hulling, &c., grain.
 — Buckhout, J. D., Hornum, W. H., & Hance, A. (Bonne-ville), 2760, Aug. 5, Fare registers.

Buckler, T. H., 4289, Dec. 7, Ships.
 Buckley, E., 1111, Mar. 27, Openers and lap machines.
 — J. B., & Stock, E., 378, Feb. 2, Stenoh-traps.
 — J. L., & Bywater, W., 2837, Aug. 12, Felt hats.
 — W., 3198, Sep. 13, Heating feed-water.
 Bucknill, J. T., & Casella, L. P., 2742, Aug. 4, Pressure gauges.
 Buckton, J., & Wicksteed, J. H., 2039, June 3, Multiple [drills, &c.]
 Badenberg, A. (Bollmann), 1780, May 13, Emery wheels.
 — A. (May), 4256, Dec. 8, Spark extinguishers.
 Budge, R. (Miralles), 1494, Apr. 23, Raising liquids.
 — R. (Miralles), 1495, Apr. 23, Heating and condensing liquids.
 Bühlmann, T. (Wirth), 2811, Aug. 10, Cleaning, &c. [grits, &c.]
 Bull, E., Spratt, G. O., & Anderson, Sir J., 2844, Aug. 12, [Electric-telegraphs.]
 — W., 1977, May 31, Kilns for burning bricks, &c.
 — W., 2061, June 4, Generating and applying heat.
 — W., 4200, Dec. 4, Evaporating saline liquids, & heating.
 Bullen, G. W., 4275, Dec. 9, Memorandum purse.
 Bullivant, W. M., 228, Jan. 20, Floating anchors.
 — W. M., 2098, June 7, Ships' rigging.
 Bullough, J., & Smalley, J., 3002, Aug. 26, Stopping [motions.]
 Bülowius, C. (Wedekind), 3084, Sep. 2, Furnaces.
 Bünner, A., 4555, Dec. 31, Street locomotives.
 Bunn, P. C., 2851, Aug. 13, Treating ores for pigments.
 Bunyard, J. B., 3285, Sep. 20, Combined table & portfolio.
 Burchett, E. S., 1011, Mar. 18, Boxes for matches, &c.
 Burdess, A., 329, Jan. 28, Railway breaks.
 — A., 753, Mar. 2, Railway breaks.
 — A., 2224, June 17, Railway breaks.
 Buret de Longagne, M. L., 1816, Apr. 10, Steam-boilers [and furnaces.]
 — M. L., 2107, June 8, Steam-cars and [engines.]
 Burgess, J., 2093, June 7, Lever corkscrews.
 — W., 915, Mar. 11, Road sweeping machine.
 Burgh, F. A. de, 106, Jan. 12, Pipes, cigar tubes, &c.
 Bürgin, E. (Jensen), 506, Feb. 11, Increasing adhesion [of locomotive wheels.]
 — E. (Alexander), 3243, Sep. 16, Magneto-electric [machines and engines.]
 Burke, T. P., 3463, Oct. 5, Shirt-fronts.
 Burkinshaw, J., & Anderson, P., 2165, June 12, Life-boats.
 Burleigh, C. (Brown), 1766, May 12, Rock-drills.
 Burley, J., 3228, Sep. 15, Cutting pile fabrics.
 Burling, E. G., 2558, July 17, Pianofortes.
 — E. T., 616, Feb. 19, Pianofortes.
 Burlison, R., & Whitaker, J., 3512, Oct. 9, Tenting and [drying.]
 Burlock, F. F. (Chapman), 59, Jan. 6, Looms.
 — F. F. (Wood), 1914, May 25, Lathes.
 — F. F. (Harwood), 2025, June 2, Carding machines; treating fibres.
 — F. F. (Chapman), 3218, Sep. 14, Looms.
 — F. F. (Harwood), 3796, Nov. 1, Carding machines.
 Burman, W., & Phipps, T. L., 2216, June 16, Horse clippers.
 Burnard, H. Jacot- (Mills), 3118, Sep. 6, Watches.
 Burnard, C. F., 2873, Aug. 14, Sulphuric acid.
 Burnett, M., & Hornsby, H., 2611, July 22, Lubricator.
 Burney, G., 1029, Mar. 20, Tank filters; attaching cement [to metal surfaces.]
 Burnier, A., 4532, Dec. 30, Artificial moss roses, &c.
 Burrell, P., & Valpy, H., 275, Jan. 23, Railway carriages; tyres.
 Burrowes, W., Atkins, G. B., & Andrew, C. B., 4541, Dec. 30, [Producing patterns in metals on silk goods, &c.]
 Burrows, J., & Flint, H., 3314, Sep. 22, Tipping coal, &c.
 Burstow, E., 4049, Nov. 22, Roller skates.

Burt, J. G. K., 4361, Dec. 16, Utilising fuel for heating.
 Burton, G. S., 2208, June 16, Decorating metal canisters, &c.
 — H. M., 1375, Apr. 15, Cutting up loaf sugar.
 — Richard, 3069, Sep. 1, Fire-arms and projectiles.
 — Robert, & Greig, A., 4453, Dec. 22, Tilling land.
 Burwin, T., 1189, Apr. 2, Shuttles for weaving.
 Bury, S., 465, Feb. 8, Self-acting temples.
 Bussey, J., 1047, Mar. 22, Assorting corks.
 Bustin, R. (Lake), 185, Jan. 18, Hanging wall-papers.
 Butler, A. E. H. B. & J. O., 3471, Oct. 6, Rolling, &c. [metal bars and tubes.]
 — E., 1738, May 10, Umbrellas and parasols.
 — G., 2856, Aug. 13, Ball-valves.
 — J. G., 1664, May 4, Button fasteners.
 — J. H., 1060, Mar. 23, Handle for trunks, drawers, &c.
 — J. O., 1196, Apr. 2, Securing railway tyres.
 — J. O. & A. E. H. B., 3471, Oct. 6, Rolling, &c. [metal bars and tubes.]
 — J. W., 1177, Apr. 1, Grinding and polishing.
 — T., 81, Jan. 9, Lace fabrics.
 — W. D., 3259, Sep. 17, Capped button lock.
 Butt, G. W., 2088, June 7, Applying power in rowing boats.
 — J. M., & Herring, J., 4126, Nov. 27, Purifying gas.
 Butterworth, A., 2238, June 18, Beer-engine tap.
 — C., & Oliver, J., 4190, Dec. 3, Bobbins.
 — E., 1286, Apr. 9, Furnaces.
 — J., Dickinson, W., & Catlow, C., 3161, [Sep. 8, Looms.]
 — J., Dickinson, W., & Catlow, C., 3368, [Nov. 6, Looms.]
 — T., 2628, July 24, Treating tobacco.
 Buxton, T., & Thornley, G., 188, Jan. 18, Cask staves.
 — T., & Thornley, G., 1518, Apr. 26, Cask staves.
 Byng, A. H., 1519, Apr. 26, Animal traps.
 Byrne, G. P., & Griffith, F. W. (Lake), 4013, Nov. 13, [Printing presses.]
 Byrom, W. A., & Wolff, J., 2422, July 5, Aniline.
 Byron, G. G. de L. (Godley), 550, Feb. 15, Carriage springs.
 Bywater, W., 864, Mar. 9, Drawing, spinning, &c. fibres.
 — W., & Buckley, J. L., 2837, Aug. 12, Felt hats.
 — W., & Whitaker, J. M., 4216, Dec. 6, Weaving.

C.

Caddick, D. R., 3467, Oct. 6, Bricks, blocks, tiles, &c.
 — D. R., 3640, Oct. 20, Bricks, blocks, tiles, &c.
 — J., 2164, June 12, Candlesticks, cash-boxes, &c.
 Cadett, J. W. T., 4035, Nov. 20, Roller & other skates.
 Cadman, W. E., 2580, July 20, Decorating articles of [dress.]
 Cadogan, Hon. G., 382, Jan. 28, Igniting & holding matches.
 Caffall, R. M., 1655, May 4, Apparatus for containing gases.
 Cahen, J. (Johnson), 2134, June 10, Treating iron compounds.
 Caillard, P. & V. (Browne), 1028, Mar. 19, Cranes.
 — V. & P. (Browne), 1028, Mar. 19, Cranes.
 Caithness, Earl of, 703, Feb. 25, Cleaning rolling stock, &c.
 — Earl of, 4233, Dec. 7, Motive-power engines.
 Caldicott, E., 3437, Oct. 4, Earring appendages.
 Calley, S., & Share, H. H., 377, Feb. 2, Raising, &c. boats.
 Calverley, J., & MacDonald, J. C., 611, Feb. 19, Printing.
 Calvert, C. A., 2034, June 2, Signalling by electricity.
 Calvo, N. A., & Bejar y O'Lawlor, L. M. de, 2101, June 8, [Telegraphy.]
 Camacho, J. S. (Johnson), 3416, Oct. 1, Electro-magnetic engines.
 Cameron, A. S., 429, Feb. 4, Steam-engines.
 — D. F. (Smith, Lester, & Lester), 4127, Nov. 27, [Furnaces.]

Cameron, H., & Hill, J. W., 2376, June 30, Horse-rakes.
 — J., 4051, Nov. 22, Steam-pumps.
 — P., 604, Feb. 19, Convertible desks and seats.
 Campbell, A. (Newton), 2679, July 28, Cutting and [folding paper].
 — A. (Newton), 3647, Oct. 20, Printers' inking [apparatus].
 Campbell, C., 3115, Sep. 6, Regulator for blind-cords.
 — D. Mac L., & Ballardie, D. 4365, Dec. 16, Ships.
 — G. E., 2220, June 16, Preserving meat, &c.
 — J., & Bradley, C., 480, Feb. 9, Combing fibres.
 — J. B., 3639, Oct. 20, Capsuling bottles.
 Campion, W., 2113, June 9, Turning off, seaming, and [stitching machines].
 Canard, F., & Mouillera, C., 4021, Nov. 19, Sinking [wells].
 Canning, Sir S., & Joel, H. F., 2518, July 13, Pneumatic signalling; testing tubes.
 Cannington, E., & Shaw, J., 3906, Nov. 10, Glass kilns.
 Cannon, W. G., 294, Jan. 26, Joint for gas pendants, &c.
 Caoutchouc & Gutta-percha Co., Continental (Wirth), [1772, May 12, Horse-shoes].
 Capper, J., 4312, Dec. 13, Ventilating houses, &c.
 Cardon, J. T., 2949, Aug. 21, Breaking and stripping [hemp, &c].
 Carey, R., & Porter, R., 902, Mar. 11, Valves.
 — R., & Porter, R., 2315, June 24, Steam-engines.
 Cargill, D., 2274, June 22, Extinguishing fire in ships.
 — D., 3152, Sep. 8, Ventilating and preventing fire [in ships].
 Carlier, V. J., & Bañolas, R. (Johnson), 1002, Mar. 18, [Railways and tramways].
 — V. J., & Bañolas, R. (Johnson), 1023, Mar. 19, [Railways and tramways].
 Carlile, Henry & Elliott, W. R. E. (Clark), 4425, [Dec. 21, Safety apparatus for mine cages, &c].
 Carlile, Hugh, 3730, Oct. 27, Locking screw-bolts & nuts.
 Carlton, I., 3959, Nov. 13, Steel ingot moulds.
 — S., 1630, May 3, Tire fastenings.
 Carlyon, P., & Titterton, F., 2464, July 8, Tube expanding [tools].
 Carmody, T. P., 3720, Oct. 27, Utilizing flints and pebbles [for building, &c].
 Carmont, W. H., 2403, July 2, Forging tires, hoops, &c.
 Caro, H. (Behrens), 1868, May 21, Treating wool.
 Carr, G. P. (Simmons), 3361, Sep. 25, Rail or tram [waggons].
 Carr, J., 3360, Sep. 25, Horse-collars.
 — T. R., & Mace, C., 2589, July 20, Steam-boiler [furnaces].
 — W., 1225, Apr. 5, Lamps.
 Carré, L. C. E. (Newton), 1634, May 3, Grates for [fire-places, &c].
 Carrick, H., & Wardale, J. D., 3458, Oct. 5, Revolving [furnaces].
 Carrington, W. T. H., 3419, Oct. 1, Testing strength and [ductility of metals, &c].
 Carte, R., 2071, June 5, Flutes.
 Carter, C., 2893, Aug. 17, Bicycles.
 — H., 3102, Sep. 4, Gas fittings and burners.
 — J., 3060, Aug. 31, Spinning, twisting, &c.
 — J. H., 1817, May 15, Disintegrators.
 — R., 4195, Dec. 4, Wood-cutting machinery.
 Cartwright, T. J., 1243, Apr. 6, Glass furnaces.
 Carulla, F. J. R., 1543, Apr. 27, Casting ingots.
 Carvell, S. L. T., & Wiggins, J. H. (Clouser), 1975, May 29, [Amalgamating machines].
 Carver, J., & Pigott, G., 41, Jan. 4, Twist lace machines.
 Casalogna, D. A. (Janot), 591, Feb. 18, Printing-presses.
 Case, G., 3447, Oct. 4, Street-sweeping machines.
 Casella, L. P., & Bucknill, J. T., 2742, Aug. 4, Pressure [gauges].

Cassinelli, J. B. D. (Lake), 3504, Oct. 9, Warming [carriages, &c].
 Casson, R. S., 3886, Nov. 9, Puddling furnaces.
 — T., 123, Jan. 13, Hydraulic-engines.
 Castanier, J. (Johnson), 3612, Oct. 18, Tunnels.
 Caswell, S., 632, Feb. 20, Railway breaks.
 Catchpole, J. L., 3744, Oct. 28, Separating and cleaning [seed, &c].
 — J. L., & Stidolph, G. F. & T. F., 612, Feb. 19, [Cleaning seed].
 Catelain, P. F. V. Dumont- (Brewer), 2687, July 29, [Cleaning boots and shoes].
 Caterston, W. M. (Johnson), 2218, June 16, Vessels for [poisons, &c].
 Catherall, J., 1544, Apr. 27, Chimney cowl.
 Catlow, C., 969, Mar. 16, Railway buffers.
 — C., & Richmond, T., 32, Jan. 4, Looms.
 — C., Butterworth, J., & Dickinson, W., 3161, Sep. 8, [Looms].
 — C., Butterworth, J., & Dickinson, W., 3868, [Nov. 6, Looms].
 — S., Blackburn, B., & Parkinson, R., 720, Feb. 26, [Mules].
 — U., & Hoyle, R., 2547, July 15, Bottle-stoppers; [cleansing, &c. same].
 Cattell, L. C. (Pate), 3594, Oct. 16, Refrigerating and [ventilating].
 Cattlin, A., 849, Mar. 8, Roller skates.
 — A., 1044, Mar. 22, Roller skates.
 Causley, C., 1503, Apr. 23, Trellis work.
 Cave, E., & Tallis, C., 788, Mar. 3, Bottles; closing same, &c.
 — J. O'C., 140, Jan. 14, Aerial navigation.
 — J. O'C., 141, Jan. 14, Governor, steam-gauge, [safety-valve, &c].
 — J. O'C., 571, Feb. 17, Rest for knives, forks, &c.
 — J. O'C., 646, Feb. 22, Torpedoes.
 Cay, G., 4072, Nov. 23, Brush-making.
 Cayce, J. M. (Clark), 1007, Mar. 18, Gravity motors.
 Cazin, F. M. F. (Thompson), 4246, Dec. 8, Lock-nuts, [bolts, &c].
 Cerpoux, J., 4289, Dec. 10, Electric-pile.
 Chadburn, W., 116, Jan. 12, Indicating speed of shafts.
 Chadwick, H., & Jardine, W., 2951, Aug. 23, Treating [cupreous solutions].
 — J., 4442, Dec. 22, Covering rollers used in [spinning].
 Chain and Car Link Co., Pittsburgh (Lake), 2973, Aug. 24, [Welding chain links].
 Chainé, J. (Browne), 3983, Nov. 16, Mechanical horse.
 Chalk, A. & W., 1583, Apr. 29, Combining wrought and [cast metals].
 — W. & A., 1583, Apr. 29, Combining wrought and [cast metals].
 Challender, J., 1077, Mar. 24, Illuminating clocks, &c.
 Chamberlain, W., & Swain, J., 4290, Dec. 10, Horse- [shoes, &c].
 Chamberlin, C. A. (Lake), 2516, July 13, Chain-cables.
 Chambers, A., 734, Mar. 1, Lighting railway carriage [lamps].
 — A., 2385, June 30, Pneumatic signals.
 Chambers, A. O. (Bartleet), 2458, July 8, Washing and [dyeing fibres, &c].
 — C. (Lake), 2799, Aug. 9, Folding, &c. paper.
 Chambers, W. H., 682, Feb. 24, Storing and carrying ex- [plosives, &c].
 Chameroy, E. A., 417, Feb. 4, Cocks for water, steam, &c.
 — E. A., 828, Mar. 6, Weighing-machines.
 Champney, G. F. (Lake), 842, Mar. 6, Metal dies.
 Chancellor, H., 3158, Sep. 8, Slide-valves.
 Chandler, S., 3601, Oct. 16, Gas-burners.
 Chanoit, F., & Midoz, F. (Morgan-Brown), 4341, Dec. 15, [Filtering reservoir].

- Chapin, G. B., Toppan, D. L., & Meloon, D. C. & H. H. [(Haseltine), 1009, Mar. 18, Wood-planing.
 — H. A. (Thomson), 2451, July 7, Spinning.
 Chapman, C. H. (Burlock), 59, Jan. 6, Looms.
 — C. H. (Burlock), 3218, Sep. 14, Looms.
 Chapman, G., 2073, June 5, Distributing, &c. types.
 — G. (Livermore), 3403, Sep. 30, Preventing
 [overheating of bearings.
 — G. (Green), 3484, Oct. 7, Lubricating oil.
 — G. E., & Lock, E., 3998, Nov. 17, Securing
 [and holding leaves of paper, &c.
 — J. G., 4411, Dec. 20, Sugar-cane mills.
 — L., 1823, May 15, Producing socket eyes on
 [tools.
 Chapman, O. S., & Souther, J. (Mills), 1668, May. 6,
 [Excavating.
 Chapman, T. J., & Fox, H. B., 1347, Apr. 14, Bottling
 [aerated liquids.
 Chaquette, E., 416, Feb. 4, Shearing sheep.
 Charageat, E., 1046, Mar. 22, Umbrellas, parasols, &c.
 Charles, W., & McKain, M. (Abel), 1240, Apr. 6, Nuts.
 Charlet, G., & Blockmans, C., 3004, Aug. 26, Steam-
 [carriages.
 Charton, E. (Bonneville), 3956, Nov. 13, Figured surfaces.
 Chase, D. la F., 1450, Apr. 21, Steam-governors.
 Chataigneau, P. P., 2178, June 14, Stopper for fire-arms.
 Chatterton, J., 736, Mar. 1, Railway chairs.
 Chatwood, S., 155, Jan. 14, Protecting ships, &c. from fire.
 — S., 3626, Oct. 19, Safes, strong-rooms & locks.
 Chauveau, U. (Tongue), 2961, Aug. 23, Rotary-engines.
 Chauvin, F. M. A., Goizet, L. H., & Aubry, A., 2410,
 [July 3, Electric submerged lamp.
 Cheadle, J. H., 230, Jan. 21, Brushes.
 Cheetham, W., 2627, July 23, Looms.
 Cherrill, N. K., 873, Mar. 9, Roller skates.
 Cherry, H., 2813, Aug. 10, Steam-pumping engines.
 — H., 3023, Aug. 27, Lifting, &c. heavy bodies.
 — H., 3984, Nov. 16, Steam-engines and pumps.
 Cheshire, J., 764, Mar. 2, Solitaires, sleeve-links, &c.
 — J., & Keel, G., 2549, July 16, Skates.
 Chesterman, W., 3715, Oct. 26, Printing measuring tapes.
 Chevallier, A., 2528, July 14, Bricks and slabs.
 — F., 1520, Apr. 26, Sample boxes.
 Cheynet, S., & Picard, B. (Henderson), 1999, June 1,
 [Cloth.
 Chibnall, A. B., 2159, June 12, Elevating chaff from
 [machines, &c.
 Child, H. W. G. (Frömbing), 1202, Apr. 2, Measuring
 [fabrics, &c.
 Childs, A. B., 4465, Dec. 23, Cleaning, &c. grain & seeds.
 Chiozza, L. (Clark), 2007, June 1, Treating maize.
 Chisholm, W. B. (King), 3297, Sep. 21, Engine valves.
 Chislett, J. R., 4038, Nov. 20, Roller skates.
 Chivers, A. & S., 349, Jan. 29, Sulphuric acid.
 — S. & A., 349, Jan. 29, Sulphuric acid.
 Chiverton, E., 818, Mar. 5, Lighting gas lamps, &c.
 Chomel, I. A., 659, Feb. 23, Suspending things in equipoise.
 Chrimes, R., 2060, June 4, Hydrants or fire cocks.
 Christy, T. (Ramspacher), 832, Mar. 6, Tanning.
 — T. (Fournaise), 1997, June 1, Water-proofing
 [fabrics.
 — T. (Pernot), 3150, Sep. 8, Puddling furnaces.
 Chubb, G. H., 653, Feb. 22, Connecting railway rails.
 Church, W. C., 1273, Apr. 8, Suction cowl for ventilating
 [shafts, &c.
 Churchward, G. D., & Messenger, T., 2666, July 28,
 [Steam and other engines.
 Clair, J. M. M., & Leproust, L., 1861, May 21, Stuffing
 [stools; packing.
 Clamond, C., 2205, June 15, Electro-motor machines, &c.
 — C., 4176, Dec. 2, Waterproofing threads,
 [fabrics, &c.
 Clapp, W. H., 1221, Apr. 3, Breaks; communicating in
 [trains.
 Clark, A. (Dows), 544, Feb. 15, Treadle apparatus.
 — A. M. (Portait & Weber), 28, Jan. 2, Preparing
 [fibres for spinning.
 — A. M. (Peck), 49, Jan. 5, Life-mattresses, pil-
 [lows, &c.
 — A. M. (Balestrieri), 89, Jan. 9, Collecting rays of
 [light and heat.
 — A. M. (Bontemps), 99, Jan. 11, Hydrostatic motor.
 — A. M. (Reed & Mulligan), 115, Jan. 12, Knitting.
 — A. M. (D'Esterno), 169, Jan. 15, Kite.
 — A. M. (Johnson), 199, Jan. 19, Rolling nut blanks.
 — A. M. (Eyquem), 256, Jan. 22, Steel.
 — A. M. (Rogé, Poret, Baffoy, & Dupré), 288,
 [Jan. 25, Preserving woven fabrics.
 — A. M. (Robinson), 338, Jan. 28, Feeding, &c. oils
 [in furnaces.
 — A. M. (Maxwell-Lyte), 563, Feb. 16, Ammonia.
 — A. M. (Guérin), 707, Feb. 26, Enlarging, &c.
 [designs.
 — A. M. (d'Hurcourt), 770, Mar. 2, Gas-meters.
 — A. M. (Hartwich & Geyer), 812, Mar. 4, Pumps.
 — A. M. (Le Marquand), 815, Mar. 4, Metallic alloy.
 — A. M. (Larocque & Larocque), 927, Mar. 12,
 [Utilising tin plate scraps.
 — A. M. (Fournier & Meyer), 928, Mar. 12, Lace.
 — A. M. (Isherwood), 1006, Mar. 18, Weft stop mo-
 [tion.
 — A. M. (Cayce), 1007, Mar. 18, Gravity motors.
 — A. M. (Porter), 1042, Mar. 22, Screw-propellers.
 — A. M. (Olivier), 1108, Mar. 25, Cutting timber.
 — A. M. (Taft), 1153, Mar. 30, Table cutlery; handles.
 — A. M. (Staub, Conrad, & Co.), 1281, Apr. 8, Pat-
 [terns for garments.
 — A. M. (Milliken), 1464, Apr. 21, Traction-engines.
 — A. M. (Thierry-Mieg), 1587, Apr. 29, Fixing, &c.
 [colors on fabrics.
 — A. M. (Deroide), 1588, Apr. 29, Making casks.
 — A. M. (Grawitz), 1604, Apr. 30, Sulphide of mercury.
 — A. M. (Edge), 1615, May 1, Chain swivels.
 — A. M. (Grawitz), 1620, May 1, Aniline black;
 [dyeing.
 — A. M. (Bates), 1639, May 3, Locking screw-nuts.
 — A. M. (O'Donoghue), 1748, May 11, Ratchet for
 [window-blinds, &c.
 — A. M. (Rochow & Matthiessen), 1810, May 14, Hy-
 [draulic-engines, &c.
 — A. M. (Lambert), 1825, May 17, Photographic
 [printing frames.
 — A. M. (Worms de Romilly), 1848, May 19, Impel-
 [ling or forcing air.
 — A. M. (Moerman-Laubuhr), 1888, May 22, Am-
 [moniacal salts.
 — A. M. (Giffard), 1889, May 22, Piston packings.
 — A. M. (Chiozza), 2007, June 1, Treating maize.
 — A. M. (Morrell), 2024, June 2, Floodway for build-
 [ings.
 — A. M. (Hussey), 2043, June 3, Electro-magnetic
 [engines.
 — A. M. (Giffard), 2064, June 4, Producing cold for
 [ice-making, &c.
 — A. M. (Von Auer & Coombs), 2092, June 7,
 [Ships' berths, &c.
 — A. M. (Agnellet & Rothmeyer), 2122, June 9,
 [Pistons.
 — A. M. (Person), 2318, June 24, Artificial flowers.
 — A. M. (Wetzlar, frères), 2350, June 28, Pipes for
 [smoking.
 — A. M. (Sawyer), 2351, June 28, Telegraphic circuits.
 — A. M. (Mason), 2478, July 9, Safety winding ap-
 [paratus.

- Clark, A. M. (*Desnos*), 2510, July 12, Paper-making.
 — A. M. (*Lodge*), 2520, July 13, Fulling-mills.
 — A. M. (*Moore*), 2804, Aug. 9, Operating scull pro-
 [pellers, &c.
 — A. M. (*Delsarte & Le Bert*), 2876, Aug. 14, Fire-arms.
 — A. M. (*Coinsin-Bordat*), 2918, Aug. 18, Bleaching
 [fibrous substances.
 — A. M. (*Powell*), 2997, Aug. 26, Iron ships.
 — A. M. (*Roudel*), 3022, Aug. 27, Measuring human
 [figure; setting out patterns.
 — A. M. (*Gandolfo & Jarboe*), 3030, Aug. 28, Treat-
 [ing bone black; moulding sugar.
 — A. M. (*Hawley*), 3063, Aug. 31, Wash basin vent
 [clearer.
 — A. M. (*Lathrop Antifriction Co.*), 3148, Sep. 7,
 [Anti-friction bearings.
 — A. M. (*Bonnard*), 3162, Sep. 8, Treating sewage.
 — A. M. (*Risler*), 3229, Sep. 15, Spinning.
 — A. M. (*M^cClintock*), 3230, Sep. 15, Seed-drills.
 — A. M. (*Williams*), 3231, Sep. 15, Rolling crimping
 [tacks, &c.
 — A. M. (*Marinoni*), 3240, Sep. 16, Printing.
 — A. M. (*Delarouze*), 3486, Oct. 7, Coating metals.
 — A. M. (*Jones*), 3526, Oct. 11, Lighting and ex-
 [tinguishing gas.
 — A. M. (*Beaumont & Beaumont*), 3527, Oct. 11, Stilt.
 — A. M. (*Reaser*), 3599, Oct. 16, Buckles.
 — A. M. (*Taylor & Kimball*), 3625, Oct. 19, Water-
 [meters.
 — A. M. (*Morrell*), 3739, Oct. 28, Ventilation and
 [water-supply of buildings.
 — A. M. (*Gégnon*), 3743, Oct. 28, Railway carriage
 [and other doors; guards.
 — A. M. (*Mathias & Mathias*), 3766, Oct. 29,
 [Coloring, &c. furs.
 — A. M. (*Farcot & Sons, & De Duclos & Co.*), 3845,
 [Nov. 4, Regulating, &c. engines and machinery.
 — A. M. (*Le Bert*), 3882, Nov. 8, Fire-arms.
 — A. M. (*Delhort*), 3911, Nov. 10, Tanning.
 — A. M. (*Morrell*), 3923, Nov. 11, Floodways for
 [buildings.
 — A. M. (*Arnoux*), 3972, Nov. 15, Valves.
 — A. M. (*Glover*), 3987, Nov. 16, Releasing horses
 [from carriages, &c.
 — A. M. (*Stryker*), 3988, Nov. 17, Excavating ma-
 [chine.
 — A. M. (*Grawitz*), 4138, Nov. 29, Artificial pur-
 [purine, &c.
 — A. M. (*Marland*), 4139, Nov. 29, Screw-nuts.
 — A. M. (*Febvre, Pouget, & Boniot*), 4147, Nov. 30,
 [Operating sewing-machines.
 — A. M. (*Courtenay*), 4148, Nov. 30, Signal buoy.
 — A. M. (*Forward*), 4160, Dec. 1, Paddle-wheel.
 — A. M. (*Bertin*), 4311, Dec. 11, Dynamo and mag-
 [neto-electric machines.
 — A. M. (*Miller*), 4345, Dec. 15, Fire-arms.
 — A. M. (*Carlile & Elliott*), 4425, Dec. 21, Safety
 [apparatus for mine-cages, &c.
 — A. M. (*Sawyer*), 4426, Dec. 21, Autographic
 [telegraphs.
 — A. M. (*De Quillfeldt & Hutter*), 4438, Dec. 22,
 [Stopping bottles, &c.
 — A. M. (*Jouret*), 4461, Dec. 22, Portable fountains.
 — A. M. (*Barthe & Co.*), 4505, Dec. 24, Cattle-food.
 — A. M. (*Rousseau*), 4517, Dec. 28, Interlocking
 [railroad switches, &c.
 — A. M. (*Walker*), 4525, Dec. 29, Tube-stopper.
 — A. M. (*White*), 4526, Dec. 29, Trap and grating
 [for drains.
 — D., 3323, Sep. 23, Warping yarns or threads.
 — G., 1230, Apr. 5, Compounds for paving, &c.
 — G., 3038, Aug. 30, Rifling, loading, &c. fire-arms.
 Clark, G., 3902, Nov. 10, Bituminous compounds.
 — G., 4330, Dec. 14, Skates.
 — G., & Spiller, A. F., 3966, Nov. 15, Bituminous
 [compounds.
 — James, & Perkins, S., 3186, Sep. 11, Dressing cases.
 — John, 2474, July 9, Furnaces for preventing smoke.
 — John, & Hales, E., 4133, Nov. 29, Locks.
 — Josiah L., 198, Jan. 19, Gas-regulators, &c.
 — Josiah L., & Standfield, J., 514, Feb. 11, Floating
 [docks and pontoons.
 — Josiah L., & Hill, E. J., 907, Mar. 11, Stowing
 [and lowering ships' boats.
 — Josiah L., & Thomson, E. H., 2864, Aug. 13, Re-
 [cording passengers in vehicles.
 — Josiah L., Warden, W. M., & Muirhead, J., 2707,
 [July 30, Galvanic-batteries.
 — W., 80, Jan. 9, Railway breaks.
 — W., 3298, Sep. 21, Boilers for locomotive engines.
 — W., 3519, Oct. 11, Wheels for railway and other
 [carriages.
 — W., 3885, Nov. 9, Preventing priming in steam-
 [boilers.
 — W. (*Malo*), 404, Feb. 3, Ships or vessels.
 — W. (*Legat*), 463, Feb. 6, Sewing straw hats, &c.
 — W. (*Lentin*), 473, Feb. 8, Application of electro-
 [dynamic machines.
 — W. (*American Life Saving Suit Co.*), 2283, June 22,
 [Saving life at sea.
 — W. (*Rousseau*), 2657, July 27, Railway signalling.
 — W. (*Sauvadet*), 2738, Aug. 3, Depilatory compo-
 [sition.
 — W. (*Rousseau*), 2740, Aug. 4, Railway signalling.
 — W. J., 4544, Dec. 30, Steam-generators.
 Clarke, E., 854, Mar. 8, Cranked shafts or axles.
 — F. R., & Hilton, W., 830, Mar. 6, Steam-traps.
 — J., 1320, Apr. 12, Railway breaks.
 — J. A., 1589, Apr. 30, Tillage implements.
 — J. A., & Maskelyne, J. N., 1804, May 14, Actuat-
 [ing automaton mechanism.
 — J. A., & Fordred, J., 2268, June 21, Cattle-food.
 — P. (*Proctor*), 4012, Nov. 18, Spark arresters.
 — S. & S. B., 685, Feb. 24, Night-lights.
 — S. B. & S., 685, Feb. 24, Night-lights.
 — T. A. W., & Donisthorpe, R. F., 4336, Dec. 14,
 [Crimped hair.
 — T. A. W., Corah, E., & Cooper, J. H., 470, Feb. 8,
 [Knitting machines.
 Clarkson, T. C., 4237, Dec. 7, Boots, shoes, and helmets.
 Claude, P. A., 4156, Dec. 1, Harmoniums.
 Clavier, A., & Deschamps, A. V., 2588, July 20, Tanning.
 Clay, T., & Schulz, J. J., 701, Feb. 25, Warp tension me-
 [chanism.
 Clayton, A., & Sinclair, J., 629, Feb. 20, Sweeping and
 [rolling machines.
 — J., 3389, Sep. 29, Bricks, tiles, &c.
 — J., & Richmond, T., 4350, Dec. 15, Looms.
 — J., Whittaker, T., & Duxbury, J., 73, Jan. 8,
 [Bricks, tiles, &c.
 — J. W., 1547, Apr. 27, Waterproof packing
 [paper, &c.
 — R., & Wilkinson, J., 1141, Mar. 30, Bottle stoppers.
 Cleaver, F. J., 4248, Dec. 8, Soaps, pomades, &c.
 — F. J., 4335, Dec. 14, Soaps, pomades, &c.
 Clegg, B. W., 1410, Apr. 17, Registering apparatus for
 [engines.
 Cleland, W., 2087, June 7, Purifying gas.
 — W., 2312, June 24, Jet apparatus.
 — W., 3704, Oct. 26, Gas.
 Clements, C. W. (*Jones*), 2548, July 15, Sail hank.
 Clements, J. M., 367, Feb. 1, Sewing-machines.
 — J. M., 1715, May 8, Sewing-machines.
 Cleminson, J., 3849, Nov. 5, Feeding steam-boilers.

- Cleveland Paper Box Machine Co.* (Haseltine), 1008, [Mar. 18, Paper boxes.
- Clibborn, F.*, & Thompson, I. C., 3963, Nov. 13, Filtering.
- Cliff, W. D.*, 4174, Dec. 2, Carriages for receiving clay [retorts, &c.
- Clinker, C.*, 513, Feb. 11, Printing machines.
- Clissold, W.*, 3181, Sep. 10, Walking-sticks, umbrellas, &c.
- *W.*, 3190, Sep. 11, Rotary cutters.
- Clouet, J. A. C. F.*, 2441, July 6, Bi-chromate of potash.
- Clough, G. A.*, 1417, Apr. 19, Steam-engines.
- *G. A.*, & Ridealgh, C., 1321, Apr. 12, Puddling.
- *H.*, Baxter, H., & Rushworth, L., 2714, July 31, [Spinning.
- Clough, W. R.* (Haseltine), 1640, May 3, Corkscrews.
- Clouser, S. F.* (Wiggins & Carvell), 1975, May 29, [Amalgamating machines.
- Coales, S. L.*, 334, Jan. 28, Coiling and uncoiling hose [pipes.
- *S. L.*, 3027, Aug. 28, Door latches, bolts, &c.
- Cocking, H.*, 3874, Nov. 8, Sewing-machines.
- Cocks, D. J.*, & Grellet, H. R., 4287, Dec. 10, Ships' [rudders.
- *F.*, & Steele, J., 3735, Oct. 28, Sewing-machines.
- Coddington, R.* (Gally), 1128, Mar. 27, Telegraphy.
- Coe, W. J.*, 4343, Dec. 15, Spring safety-valves.
- Coffin, D. N. B.* (Ittmann), 1130, Mar. 29, Steering [gear, &c.
- Cogent, L.* (Lutwyche), 4416, Dec. 21, Saddles.
- Cogswell, C.*, 913, Mar. 11, Wind-screen for carriages.
- Cohrs, J. H.*, 2146, June 11, Railway couplings.
- Coignard, J.*, 3767, Oct. 29, Sewing sails, &c.
- Coinsin-Bordat, C. L. J.* (Clark), 2918, Aug. 18, Bleach- [ing fibrous substances.
- Colaert, H.* (Morgan-Brown), 90, Jan. 9, Shutters and [windows.
- Colborne, Hon. J.*, & St. George, T. C. B., 3239, Sep. 16, [Motive-power.
- Cole, F.*, 110, Jan. 12, Crushing baryta, cocoa, sugar, &c.
- *F.*, 698, Feb. 25, Hanging and fastening sashes, [doors, &c.
- *H. J.*, 2079, June 5, Closing, &c. aerated liquid bottles.
- *James, & J.*, 4512, Dec. 28, Steam-engines.
- *John, & J.*, 4512, Dec. 28, Steam-engines.
- *Joseph B.*, 4016, Nov. 19, Brooms.
- *S.*, 495, Feb. 10, Compositions for inkstands, &c.
- *W.*, 3580, Oct. 15, Fire-lighters.
- Colebrook, C. T.*, 261, Jan. 23, Raising liquids, &c.
- *C. T.*, 1414, Apr. 17, Steam-engines, &c.
- Coleman, C. C.*, 3072, Sep. 1, Preparing fibres.
- *J. J.*, 1954, May 28, Treating excreta.
- *T.*, 986, Mar. 17, Rollers for horses.
- Collet, A.*, 2002, June 1, Steam-generator.
- Collette, G. E.*, 4394, Dec. 18, Rollers or castors.
- Collier, J.*, & Holding, J., 19, Jan. 2, Coppers & other boilers.
- *J.*, & Marsden, J., 790, Mar. 3, Looms.
- *J.*, & Marsden, J., 1349, Apr. 14, Looms.
- Collière, Malinet, & Co.* (Henderson), 2730, Aug. 3, [Woollen yarn.
- Collignon, C. L.* (Gedge), 1905, May 25, Cast-iron.
- Collingridge, A.*, 867, Mar. 9, Pumping, hauling, &c.
- Collings, C. E.* (Lohnstein), 3716, Oct. 26, Folding doors, [casements, &c.
- Collingwood, E.*, 79, Jan. 9, Bearings for shafts.
- *E. & T.*, & Hill, R., 3452, Oct. 5, Couplings.
- *T. & E.*, & Hill, R., 3452, Oct. 5, Couplings.
- Collins, R.*, Longsdon, D., & Murray, J. W., 1444, Apr. 21, [Ships.
- Collinson, H.* (Soley), 3260, Sep. 17, Covers or lids.
- Colls, F. W.*, 4362, Dec. 16, Gas.
- Coltman, H.*, & Hughes, H., 4023, Nov. 19, Tram or [road locomotives.
- Coltman, T.*, 1629, May 3, Looped or knitted fabrics.
- Colton, E. G.*, 3241, Sep. 16, Skates.
- Colwell, C.*, 1708, May 7, Rescue apparatus for mariners, &c.
- Coly, L.*, & Gravelaine-Maloney, A. J. (Browne), 1088, [Mar. 25, Purging steam-engine cylinders.
- Comber, W. H.*, 3189, Sep. 11, Ratchet-braces; conver- [ting motions.
- Comte & Mabut, la Société, & Jolissaint-Vonèche, A. G.*, [Tongue), 3290, Sep. 20, Vegetable leather.
- Condenser, Co., Ransom Syphon* (Sault), 3543, Oct. 12, [Steam-condensers.
- Cone, J.* (Johnson), 2219, June 16, Life-rafts, &c.
- Conn, C. G.* (Mills), 782, Mar. 3, Musical instruments.
- Connell, A.*, 302, Jan. 26, Wagons.
- Connolly, T.*, & Thomson, B. L., 3138, Sep. 7, Protec- [ting ships, &c.
- Conod, A.*, 2335, June 26, Electric clocks, &c.
- Conquest, W.* (Tucker), 3105, Sep. 4, Cutting and fold- [ing paper, &c.
- Conrad, Staub & Co.* (Clark), 1281, Apr. 8, Patterns for [garments.
- Conradi, H.* (Kessler), 1252, Apr. 7, Treating peat, &c.
- *H.* (Kessler), 1301, Apr. 10, Coke from peat.
- *H.* (Sack), 1469, Apr. 22, Screw heads and nuts.
- *H.* (Kessler), 2643, July 26, Railway couplings.
- Constant, A.* (Newton), 3630, Oct. 19, Packing piston- [rods.
- *J.* (Johnson), 301, Jan. 26, Connecting tubes.
- Continental Caoutchouc & Gutta-percha Co.* (Wirth), [1772, May 12, Horse-shoes.
- Converse, M. D.* (Elliott), 1773, May 12, Extracting [nails, &c.
- Conway, T. W.*, 1292, Apr. 9, Tiles.
- Cook, F.*, 1354, Apr. 14, Pen and pencil cases.
- *H. W.*, 938, Mar. 13, Pumping & forcing liquids, &c.
- *H. W.*, 1505, Apr. 23, Purifying hydrogen gas.
- Cook, J. B.*, & Heath, J. W. (Harris), 3375, Sep. 27, [Prisons, &c. and alarm attachments for same.
- *M. & M. G.*, Nichols, H. S., & Magerison, E. [Tasker), 1043, Mar. 22, Bobbin-winder.
- *M. G. & M.*, Nichols, H. S., & Magerison, E. [Tasker), 1043, Mar. 22, Bobbin-winder.
- Cook, R.*, & Searle, W., 2886, Aug. 16, Stamping, or- [namenting, and shaping leather, &c.
- *W.*, & Hall, S., 1501, Apr. 23, Rendering tallow.
- Cooke, B.*, & Thompson, W. P., 2196, June 15, Break- [waters, piers, buildings, &c.
- *J.*, 839, Mar. 6, Rotary-engines and pumps.
- *J.*, 950, Mar. 15, Rotary-engines and pumps.
- *L.*, 2156, June 12, Colouring, &c. paper.
- *W.*, & Mylchreest, D., 4469, Dec. 23, Steam- [generators.
- Coombe, J. C.*, 287, Jan. 25, Blacking.
- Coombs, R.*, 2170, June 14, Confectionery or sweetmeats.
- Coombs, R. T.*, & Von Auer, W. (Clark), 2092, June 7, [Ships' berths, &c.
- Cooper, A.*, 728, Feb. 27, Bankers' cheques, &c.
- *C. F.*, 2622, July 23, Ship-saving, &c. machine.
- *J.*, 3788, Nov. 1, Tilting casks and barrels.
- *J. H.*, Clarke, T. A. W., & Corah, E., 470, Feb. 8, [Knitting machines.
- *W.*, 1497, Apr. 23, Setting out, &c. slide-valves.
- Cooper, W. S.* (Storer), 693, Feb. 25, Waterclosets.
- Cope, E.*, & Maxwell, J. R. (Benson), 3598, Oct. 16, [Steam-pumping or air-compressing engines.
- Cope, T.*, 1686, May 6, Cigarettes.
- Copeland, C. J.*, 4144, Nov. 30, Casting steel.
- Copié, A.*, & Lewis, S. S., 988, Mar. 17, Soap.
- *A.*, & Lewis, S. S., 3248, Sep. 17, Soap.
- Copland, D.* (Britton), 1097, Mar. 25, Combs.
- *H. S. S.*, 2099, June 7, Wood-paving.
- Copley, J.*, & Jennings, W., 3141, Sep. 7, Dyeing, &c. [tissues & fibres; obtaining products from same.

Copp, W. L., & White, C., 1948, May 27, Gas.
 Corah, E., Cooper, J. H., & Clarke, T. A. W., 470, Feb. 8, [Knitting machines].
 Corbett, J. W., 1920, May 26, Kilns.
 — S., 2365, June 29, Pulping, cutting and cleaning [turnips, &c].
 — S., 3135, Sep. 7, Ploughs for raising potatoes, &c.
 — S., 4140, Nov. 30, Mills for crushing, splitting, &c.
 Cordillot, H. F. A., & Mather, W., 479, Feb. 9, Steaming [printed fabrics].
 Corfield, W., 1572, Apr. 29, Ventilating.
 Cornely, E. (Gedge), 306, Jan. 27, Edging machines.
 Cornevin, J. M. (Armengaud), 2133, June 10, Steam- [boilers].
 Cornforth, J. & T., & Ratcliff, F. & W. H., 3944, Nov. 12, [Steam blowing apparatus].
 — S., & Ratcliff, F. & W. H., 3826, Nov. 3, Gas.
 — T. & J., & Ratcliff, F. & W. H., 3944, Nov. 12, [Steam blowing apparatus].
 Cornish, H. M. (Cornish), 577, Feb. 17, Mattresses, life- [buoys, &c].
 — K. H., 1789, May 13, Furnaces.
 Cornish, T. (Cornish), 577, Feb. 17, Mattresses, life- [buoys, &c].
 Corrigan, J., & Stubbs, J., 1717, May 8, Winding [threads, &c].
 Corron, C. (Sauvée), 3757, Oct. 29, Wringing skeins of [silk, &c.; and separating the threads].
 Corry, W. F. C. S., 1318, Apr. 12, Aërated waters; [vessels therefor].
 Cort, J., 4317, Dec. 13, Valves.
 Cory, E., 286, Jan. 25, Motive-power engines, pumps, &c.
 Costa, T., & Rinaldini, A. (Fellinger), 1525, Apr. 26, [Catching insects].
 Coste, N. A. (Gouget), 2244, June 18, Furnace grates.
 — S., 2544, July 15, Ventilating apparatus.
 Cottew, C., 3805, Nov. 2, Marine-boilers.
 Cotton, S., 844, Mar. 6, Preparing fibres.
 Cottrill, R. N., 4199, Dec. 4, Flyers for roving frames.
 — S., 414, Feb. 4, Railway signals.
 Couchman, J. W., 3548, Oct. 13, Raising sunken vessels, &c.
 Coughlin, D., 2413, July 3, Ice; refrigerating, &c.
 Coughlin, D. (Wheeler), 4054, Nov. 22, Ice; refrigerat- [ing, &c].
 Coupe, H., & Wilson, E., 1069, Mar. 24, Folding doors.
 Courteille, H. (Lake), 3217, Sep. 14, Blasting-powder.
 Courtenay, J. M. (Clark), 4148, Nov. 30, Signal buoy.
 Courtenay, R. H., 1487, Apr. 23, Electro-magnetic motor.
 — R. H., 1646, May 4, Producing steam-power.
 — R. H., 3509, Oct. 9, Thermo-electro-magnetic [motor].
 Courtois, C., 3383, Sep. 28, Clipping or shearing animals.
 Cousins, C., 3049, Aug. 31, Drums of rotary screens.
 Coux des Roseaux, M. A. J. de la, 3202, Sep. 13, Lubri- [cators].
 Coventry, A., & Smith, W. F., 4047, Nov. 22, Lathes.
 Coward, J., 1381, Apr. 15, Brick and tile machines.
 Cowell, F. A., 4408, Dec. 20, Kilns or furnaces.
 — F. A., 4409, Dec. 20, Blocks, bricks, &c.
 Cowper, E. A., 2123, June 9, Applying heat in furnaces.
 — E. A., 3233, Sep. 16, Tunnelling.
 — E. A., 3350, Sep. 24, Glass furnaces.
 — E. N., 165, Jan. 15, Heating towns.
 Cowper, P., & Scholes, F. (Bousfield), 2482, July 9, [Rubber belting].
 Cowper, R., 1331, Apr. 13, Kaleidoscopes.
 Cox, B., & Hosmer, C. (Norwood), 1067, Mar. 24, Needle [and fastener for upholstery buttons].
 — J., 723, Feb. 26, Preparing fertilisers.
 — P. E., & Helwig, A., 4455, Dec. 22, Implement for [opening cans, &c].
 — W., 642, Feb. 22, Compressing yarn.

Cox, W., 1465, Apr. 22, Treating yarns for sewing- [machines].
 — W., & Howard, J., 277, Jan. 25, Saddle-girth [tightener].
 — W., & Howard, J., 2618, July 23, Saddle-girth [tightener].
 Crabtree, A., 1304, Apr. 10, Purifying middlings.
 — J., & Lee, J. D., 3964, Nov. 13, Looms.
 — M., 2179, June 14, Bobbins and spools.
 — T., Woodhead, W., & Shaw, B., 740, Mar. 1, Looms.
 — W., & Hanson, W., 3066, Sep. 1, Looms.
 Craig, J., & Crichton, A., 1096, Mar. 25, Railway signals.
 — L. D., & Miller, C., 4536, Dec. 30, Tenon joint [fastening for chairs].
 — W., 2190, June 15, Grubbers for cultivating; [strengthening wheels].
 Craighead, H. (Jewitt), 1548, Apr. 27, Reflectors.
 Cramer, P. (Newton), 2913, Aug. 18, Dredging or exca- [vating].
 Cramp, A. H., 225, Jan. 20, Stretching boots and shoes.
 — A. H., 374, Feb. 1, Marking and cutting textile [materials].
 — A. H., 1078, Mar. 24, Stocking supporters.
 — A. H., 2444, July 7, Cutting, &c. button holes.
 — A. H., 3936, Nov. 12, Quoits.
 Crampton, T. R., 789, Mar. 3, Revolving furnaces.
 — T. R., 3282, Sep. 18, Iron and steel.
 Crandall, C. M. (Lake), 2009, June 1, Toy-menageries.
 — J. N., & Fuller, J. B. (Lake), 3364, Sep. 25, [Magneto-electric machines].
 Cranston, W. McL. (Scott), 677, Feb. 24, Portable lathes.
 — W. McL. (Wood), 2629, July 24, Collecting & [binding crops].
 Craven, B. & J., 4191, Dec. 3, Moulding bricks, tiles, &c.
 — J., 1732, May 10, Bricks, tiles, &c.
 — J. & B., 4191, Dec. 3, Moulding bricks, tiles, &c.
 Crawley, W., 517, Feb. 12, Ships.
 Crease, J. F., 2017, June 2, Filters.
 Creasy, J. T., & Tully, W., 1692, May 6, Motive-power.
 — J. T., Tully, W., & Monckton, E. H. C., 3396, [Sep. 29, Motive-power].
 Crichtley, H., 859, Mar. 8, Stoves or fireplaces.
 Crichton, A., & Craig, J., 1096, Mar. 25, Railway signals.
 — H. G. L., 1535, Apr. 27, Saddles and numnahs.
 Crighton, S., & Murray, T., 3400, Sep. 30, Earthenware [bottles, &c].
 Crine, W. N., & Shelley, H., 981, Mar. 17, Umbrella tip [fastener].
 Crisp, C., 2974, Aug. 25, Life-saving, &c. garment.
 — H., Young, F., & Hudleston, B., 2697, July 30, As- [certaining distances].
 Crist, J. (Edwards), 748, Mar. 1, Furniture casters.
 Crocker, S. L., 768, Mar. 2, Smelting copper ores.
 Crohn, F. W., 4184, Dec. 3, Steam-engines for towing, &c.
 — F. W., & Okes, J. C. R., 3446, Oct. 4, Engine and [pump].
 Croll, A. A., 1307, Apr. 10, Treating sulphur ores.
 Crombie, E. E., 425, Feb. 4, Dry gas-meters.
 Crompton, G. (Morgan-Brown), 146, Jan. 14, Looms.
 — G. (Morgan-Brown), 1967, May 29, Boiler [anti-incrustation battery].
 Crook, T., & Hulton, W. & J., 881, Mar. 10, Winding [yarn, &c].
 Crookes, W., 3860, Nov. 5, Indicating intensity of radiation.
 — W., & Rayner, H., 2678, July 28, Absorbing acid [vapours].
 Crosby, A., & McCabe, W. (Benson), 4032, Nov. 20, [Cleaning steam-boiler flues].
 Crosby, J. B. (Kellogg), 324, Jan. 28, Fur-coated fabrics.
 — J. B. (Kellogg), 325, Jan. 28, Head coverings.
 — W., 3644, Oct. 20, Confectionary and biscuits.
 Crosland, J. S., 3209, Sep. 14, Steam-engines.

- Diprose, J., & Larkman, J., 2788, Aug. 7, Coffins.
Disston, T. S. (Johnson), 2605, July 21, Blowers for com-
 pressing, &c. fluids.
 Dittmar, C. F. W. E., 3088, Sep. 3, Explosive compounds.
 Dix, A. M., 208, Jan. 19, Axles for waggons, &c.
 Dixon, A. A. (*Rougy*), 3117, Sep. 6, Injector for boilers.
 — Francis, Rockliffe, W., & Gaine, J. S., 3313,
 [Sep. 22, Coating ships, &c.
 — Frederic, 2609, July 22, Treating wood-casks for
 storing and preserving liquids, &c.
 — G., Maddox, J., Gardner, E., & Hughes, T., 567,
 [Feb. 16, Fringes.
 — J., 2319, June 24, Ventilating tunnels, &c.
 — J. (*Murch*), 2063, June 4, Reflectors.
 — S., 2932, Aug. 20, Lids of chamber utensils, &c.
 Dixwell, G. B., 1012, Mar. 19, Steam-engines.
 — G. B., 2934, Aug. 20, Steam-engines.
 Dobbie, R., & Forbes, P., 3917, Nov. 11, American stoves.
 Dobson, B. A., Macqueen, J., & Rushton, T. H., 2292,
 [June 23, Combing machines.
 — N., 926, Mar. 12, Weaving imitation skins & furs.
 — T., 794, Mar. 3, Cutting linseed oil-cakes.
 — T. S., 1912, May 25, Furnace bars.
 Dodd, J., 2801, Aug. 9, Ventilating and flushing water-
 closets, &c.
 Dodge, F. (Lake), 1725, May 8, Peat-fuel.
 Dodge, J., 2720, July 31, Drilling and boring.
 Dodge, T. A. (Morgan-Brown), 2200, June 15, Weaving
 [and waterproofing fabrics.
 Dodman, G. S., 4099, Nov. 26, Picture frames, table
 [mats, &c.
 Dolne, L., 534, Feb. 13, Revolvers.
 Dominy, G., & Russell, J., 398, Feb. 3, Guards for forks.
 Donald, J., 532, Feb. 13, Stoking apparatus for furnaces.
 Donisthorpe, R. E., & Clarke, T. A. W., 4836, Dec. 14,
 [Crimped hair.
 Donna, J., & Viglino, J. (Morgan-Brown), 626, Feb. 20,
 [Motive-power.
 — J., & Viglino, J. (Morgan-Brown), 729, Feb. 27,
 [Railway axles.
 Donovan, R. E., & McKenzie, W., 3265, Sep. 18, Soaps.
 Doolittle, T. B., 1434, Apr. 20, Alarm registers.
 Dorat, H. J. (*Grave*), 210, Jan. 20, Gas-burners, &c.
 Dottridge, S., 1183, Apr. 1, Hearses.
 Doty, H. H. (Morgan-Brown), 752, Mar. 2, Lamps.
 Douglas, W. H., 348, Jan. 29, Sewing-machines.
 Doull, D., 3503, Oct. 8, Feeding water to steam-boilers.
 Doulton, H., 1847, May 19, Earthenware pipes.
 — J., 365, Jan. 30, Stoves.
 Dow, D., & Telfer, J., 3089, Sep. 3, Chlorine.
 — D., & Telfer, J., 3153, Sep. 8, Oxide of manganese,
 [nitrates, &c.
 Downton, J., & Just, M. Z., 4475, Dec. 23, Watercloset.
 Dows, G. D. (Clark), 544, Feb. 15, Treadle apparatus.
 Draper, F., & Archer, J., 2272, June 22, Twist lace machines.
 Draper, G. P. (Brewer), 1122, Mar. 27, Sewing-machine
 [tables.
 Draper, M., 1018, Mar. 19, Boots and shoes.
 Dresser, F., 4393, Dec. 18, Cements.
 Drevelle, A. (Ledger), 4431, Dec. 22, Separating stamps.
 — A., Petitjean, P., & Labbé, F. (Browne), 2386,
 [June 30, Casters.
 Dreyse, F. von (Newton), 4198, Dec. 4, Fire-arms.
 Dronsfield, J. S., 1039, Mar. 20, Grinding cards and card
 rollers; exhausting, &c. fluids.
 — J. S., 3786, Nov. 1, Grinding card-flats & rollers.
 Drory, J. F. T. (Walker), 3398, Sep. 30, Gas-testing cock.
 Drummond, D., 1986, May 31, Fastening tires on wheels.
 — D., 3044, Aug. 30, Railway buffers.
 Duboin, P. (Gedge), 2175, June 14, Consuming smoke.
 Du Bois, F. N. (Lake), 3646, Oct. 20, Lead traps.
 — F. N. (Lake), 4026, Nov. 19, Plumbers' traps.
 Dubois, J. L., 2989, Aug. 26, Cocks or taps.
 Dubuc, E., & Mutel, V. (Autier), 2898, Aug. 17, Wash-
 ing clothes, &c.
 Dubuisson, G. W. (Lake), 1533, Apr. 27, Treating jute,
 [&c. for paper.
 Duchesne, A. (Bonneville), 3010, Aug. 27, Gas.
 Duckham, F. E., 2491, July 10, Raising, &c. landing
 stages and platforms.
 — F. E., 4400, Dec. 18, Discharging mud from
 [dredgers.
 — H. A. F., 2905, Aug. 18, Gas-regulators.
 Duclos, S. de, & Co., & Farcot & Sons (Clark), 3645,
 [Nov. 4, Regulating, &c. engines and machinery.
 Ducournan, J., 4444, Dec. 22, Cements and limes.
 Duddell, G., 3939, Nov. 12, Roller skates; wheeled car-
 riages.
 Dudgeon, A., 33, Jan. 4, Distilling.
 — A., 3037, Aug. 30, Distilling liquors.
 Dufour, F. V. (Gedge), 20, Jan. 2, Agricultural machine.
 — L. F. D. (Gedge), 3449, Oct. 5, Steam-generators.
 Dufrené, H. A. (*Léveque*), 195, Jan. 19, Railway sleepers.
 — H. A. (*Dauner*), 438, Feb. 5, Horse-collars.
 — H. A. (*Bazelaire*), 1527, Apr. 26, Locking or
 fastening.
 — H. A. (*Glaizot, frères*), 2815, Aug. 11, Treating
 sea-wrack.
 Dührkop, P. (Jensen), 904, Mar. 11, Bakers' ovens.
 Dumont, A., & Alfieri, E., 512, Feb. 11, Lockets.
 Dumont-Catelain, P. F. V. (Brewer), 2687, July 29,
 [Cleaning boots and shoes.
 Du Motay, C. M. Tessié (Abel), 1305, Apr. 10, Treating
 wild silks for dyeing, &c.
 — C. M. Tessié (Smith), 2812, Aug. 10, Bleach-
 ing fibres.
 — C. M. Tessié (Smith), 3669, Oct. 22, Bleach-
 ing wool and silk.
 Dunbar, H. P., & Lothrop, T. C., 4372, Dec. 17, Vul-
 canized rubber articles.
 — J., & Ruston, J., 4480, Dec. 24, Excavating.
 Duncan, James, & Newlands, B. E. R., 4107, Nov. 26,
 [Sugar, &c.
 — James, & Newlands, J. A. R. & B. E. R., 4264,
 [Dec. 8, Treating saccharine products.
 — John T. (*Richards*), 2020, June 2, Numbering
 coupons, cheques, &c.
 — John W., 4542, Dec. 30, Fire-arms.
 — R., 1733, May 10, Steam-engines.
 — R., 3034, Aug. 28, Moulding bricks, tiles, &c.
 Dunlop, A., & Ree, W., 1890, May 24, Dressing stone, &c.
 — A., & Ree, W., 4120, Nov. 27, Tools, &c. for
 dressing stone, &c.
 — R. H. W., 3236, Sep. 16, Aiding human loco-
 motion in the water.
 Dunn, G. N., 4006, Nov. 18, Life-boat or raft.
 — R., 1926, May 26, Furnaces.
 Dunstan, J. Q., 3273, Sep. 18, Strainers for pumps, &c.
 Dupré, P. S. E., Royé, H. N., Poret, E., & Baffoy, P. H.
 [Clark), 288, Jan. 25, Preserving woven fabrics.
 Durand, C. G. Roger-, 4100, Nov. 26, Knitting machine
 [needles.
 — F., & Marais, E. L., 1534, Apr. 27, Moulding
 bricks, &c.
 Durfee, Z. S. (Imray), 3317, Sep. 22, Boiler furnaces.
 Durham, W., 3564, Oct. 14, Purifying water.
 Du Rieux, E. J. J. B. D. (Brookes), 2412, July 3, Gas.
 Durrance, J. & R., & Hall, W., 1131, Mar. 29, Driving bands.
 — R. & J., & Hall, W., 1131, Mar. 29, Driving bands.
 Durrande, A. B. (Brookes), 865, Mar. 9, Sleeve buttons, &c.
 Duthie, R., 3779, Oct. 30, Steering ships, &c.
 Dutton, R., & Renshaw, W., 3553, Oct. 13, Finishing
 velvets, &c.
 — S. T., 936, Mar. 13, Signalling on railways.

Du Vallon, G. C. J. de Jacobi, & West, H. J., 2239,
[June 18, Skating rinks.
Duxbury, J., & Lomnitz, E. J., 1267, Apr. 8, Ornament-
[ing "dhooties."
—— J., Clayton, J., & Whittaker, T., 73, Jan. 8,
[Bricks, tiles, &c.
Dyer, G., 1651, May 4, Fire-bars and backs for stoves, &c.
—— H. C. S., 1330, Apr. 13, Gun-barrels.
—— H. C. S., 3736, Oct. 28, Wheel tyres.
—— J., 3585, Oct. 15, Benzoline lamps.
Dyk, H. van, 3212, Sep. 14, Reticules, &c.
Dykes, W., & Scott, J., 2030, June 2, Taps or valves.

E.

Eagles, J. G., 3510, Oct. 9, Cattle-food.
Englesham, J., & Rigg, H., 3969, Nov. 15, Cooling and
[lubricating pumping machinery.
Eaton, J. & R., 3266, Sep. 18, Hats.
—— L., 1945, May 27, Chronometers, &c.
—— R. & J., 3266, Sep. 18, Hats.
Eccles, J. P., 3371, Sep. 27, Beverage or liquor.
Eckersley, J., Slater, W., & Gerrard, J., 1035, Mar. 20,
[Sizing and dressing yarns.
Eckhold, C. A. C., 1237, Apr. 6, Pipes for smoking.
Edge, J. S., 3643, Oct. 20, Fire-arms.
Edge, W. (Clark), 1615, May 1, Chain swivels.
Edison, T. A., 384, Feb. 2, Telegraphs.
—— T. A., 3762, Oct. 29, Autographic printing.
Edmett, J., 3721, Oct. 27, Curtain bands for windows.
Edmonds, E. & G., 3136, Sep. 7, Swivels and watch-keys.
—— G. & E., 3136, Sep. 7, Swivels and watch-keys.
—— J. R., 3513, Oct. 9, Turning over leaves of music.
Edmondson, J., & Wadsworth, J., 657, Feb. 23, Nails.
Edson, M. B. (Haseltine), 1181, Apr. 1, Recording
[steam gauges.
—— N. T., & Silliman, C. H. (Haseltine), 1677,
[May 5, Paddle-wheels.
Edwards, Edmund, 1996, June 1, Steam-engines.
—— Edmund, 2013, June 2, Drilling holes.
—— Edmund (Boullenoit), 75, Jan. 8, Safety-lamps.
—— Edmund (Edwards), 357, Jan. 30, Rollers.
—— Edmund (Crist), 748, Mar. 1, Furniture casters.
—— Edmund (Sheldon), 1106, Mar. 25, Butter tubs.
—— Edmund (Mitchell), 3764, Oct. 29, Bent metal
[tubes.
—— Ernest, 1362, Apr. 15, Printing.
Edwards, Ernest (Edwards), 357, Jan. 30, Rollers.
—— Ernest (Haddan), 3453, Oct. 5, Printing from
[gelatine plates.
Edwards, G., 3935, Nov. 12, Fastening sashes, cupboards, &c.
—— H. & S., 2983, Aug. 25, Saddle-trees.
—— J., 961, Mar. 16, Drawing liquids from vessels.
—— J., 1616, May 1, Bottling and drawing off liquids.
—— J., 2906, Aug. 18, Railway coaches.
—— J., 3091, Sep. 3, Actuating railway brakes.
—— J. & Livesey, J., 2563, July 17, Locking points.
—— S. & H., 2983, Aug. 25, Saddle-trees.
—— W., 540, Feb. 13, Railway and other wheels.
Egasse & Co. (Brewer), 2911, Aug. 18, Disinfectants.
Egerton, H. A., 4549, Dec. 30, Ships, ferry-boats, &c.
Ehrhardt, H. A. T., 4374, Dec. 17, Flange & other joints.
Ekström, A. H. A., 219, Jan. 20, Centrifugal pumps.
Elborough, C. M. (Leopolder), 797, Mar. 4, Liquid-meters.
Elce, J., 366, Feb. 1, Spinning and doubling fibres.
Elecock, C., 807, Mar. 4, Artificial animal charcoal.
Eli, A. J., 2027, June 2, Drawing liquids from casks, &c.
Elias, D., 2776, Aug. 6, Stoppers for bottles, &c.
Elkan, D., 887, Mar. 10, Securing tips of umbrellas, &c.

Ellerbeck, J. H. T., & Syers, J. M., 4326, Dec. 14, Mo-
[tive-power.
Ellington, E. B., 4389, Dec. 18, Raising weights.
Elliot, W., 2909, Aug. 18, Propelling sailing vessels.
Elliott, A. H. (Converse), 1773, May 12, Extracting
[nails, &c.
—— James, 3077, Sep. 1, Sewing-machine needles.
—— James, 3674, Oct. 22, Sewing-machines.
—— John, & Parker, W. H., 2484, July 10, Blind-
[rollers.
—— John W., 2995, Aug. 26, Cleaning table cutlery.
Elliott, W. R. E., & Carlile, H. (Clark), 4425, Dec. 21,
[Safety apparatus for mine-cages, &c.
Ellis, A., & Robson, G., 803, Mar. 4, Safety-lamps.
—— C., & Sedden, J. F., 3327, Sep. 23, Dry ash-closets.
—— F. R., 4309, Dec. 11, Expansion joint for fire-bars.
—— H. & J., 3104, Sep. 4, Cranes or crabs.
—— James, 741, Mar. 1, Pianofortes, organs, &c.
—— John, 785, Mar. 3, Inhaler for invalids.
—— John, 3165, Sep. 9, Lubricating axles and wheels.
Ellis, John (Swann), 1063, Mar. 23, Gas-burners.
Ellis, John & H., 3104, Sep. 4, Cranes or crabs.
—— John, Helm, T., Abbott, T., & Ainsworth, T., 2908,
[Aug. 18, Dobby for looms.
—— R. J., 3128, Sep. 7, Tubular fire-bars, &c.
—— T., 69, Jan. 8, Preparing yeast.
—— T. A., & Warran, J., 1794, May 14, Ore stampers.
—— W., 900, Mar. 11, Boring rocks, &c.
—— W. H., 2369, June 29, Safety box for cash, &c.
Ellison, J., 30, Jan. 4, Door fasteners.
—— J. W., 2596, July 21, Grinding corn.
Elsley, T., 2032, June 2, Mortice locks.
Elson, S., 1138, Mar. 30, Fuel economisers, &c.
Elst, C. L. van der (Johnson), 2584, July 20, Steam-
[engines.
—— C. L. van der (Johnson), 2718, July 31, Dredging-
[machines.
Elwert, J. H., & Pack, J. J. M. (Morgan-Brown), 3254,
[Sep. 17, Ammoniacal salts.
Elwes, R. G., 1386, Apr. 16, Slate pavements, steps, &c.
—— R. G., 2189, June 15, Filters for sugar, &c.
Emanuel, M., 1289, Apr. 9, Salt-cellars, &c.
Embley, H., & Pilkington, W., 3670, Oct. 22, Graining wood.
Emett, C., & Angel, B., 3460, Oct. 5, Indicators or gauges.
Emmerich, O. (Wirth), 193, Jan. 18, Fire-arms.
Emmet, C., 4141, Nov. 30, Making bricks, &c.
Emsley, S., & Smith, S., 2215, June 16, Drying, &c.
[fibrous materials in hanks.
Engel, E., 2704, July 30, Fire-arms.
English, E., & Mabane, T., 2809, Aug. 10, Boots & shoes.
Enoch, E., 190, Jan. 18, Boring or drilling machine.
Ermatinger, J. H. (Sace), 3073, Sep. 1, Preserving meat, &c.
Ermen, G. A., 2722, Aug. 2, Fire-arms.
Ernst, J. R., & Sulzer, H. & A. (Johnson), 3170, Sep. 9,
[Motive-power engines.
Erskine, F., 1574, Apr. 29, Furnaces and fire-bars.
—— J., 3450, Oct. 5, Utilising waste heat from
[marine boilers; heating feed-water, &c.
Eskrett, C., 1498, Apr. 23, "Wrappers" for oil-cake
[making.
Espeut, W. B. (Allport), 3465, Oct. 5, Sugar.
Espinasse, A., 3806, Nov. 2, Puddling ovens.
Espir, C. (Le Bricquair), 291, Jan. 26, Mining powder.
Esterno, F. C. H. P. d' (Clark), 169, Jan. 15, Kite.
Estienne, A. (Walker), 3810, Nov. 2, Bush for boiler
[tubes and plates.
Etrich, L., 2054, June 4, Breaking, &c. flax and hemp.
Evans, I., 552, Feb. 15, Handles for parcel straps, &c.
—— J. O., 2674, July 28, Weaving.
—— P., & Williams, H., 22, Jan. 2, Stoppering bottles.
—— W. E., 4283, Dec. 10, Harmoniums.
Evershed, E., 1178, Apr. 1, Drawing or depicting objects-

Ewen, F. W., and James, G. F., 1719, May 8, Insulating [telegraph wires].
 Ewer, E. de, & Bloomfield, H., 3250, Sep. 17, Gas.
 Eyland, C. N., 3409, Oct. 1, Buckles for braces, &c.
 Eyquem, J. (Clark), 256, Jan. 22, Steel.
 Eyre, F. J., 2600, July 21, Screw-propellers.
 — G., 4154, Dec. 1, Windows and ventilators.
 Eyth, M., & Greig, D., 663, Feb. 23, Steam-engines.
 Ezard, C., 3047, Aug. 31, Ash-pans.
 — C., 3068, Sep. 1, Furnace fire-bars.

F.

Faber, J. L. von, 178, Jan. 16, Pencils.
 Fageol, P., 2251, June 19, Gas-generator.
 Fairbairn, C., 4037, Nov. 20, Screw-bolts.
 Fairbank, J., & Hollings, A., 2818, Aug. 11, Belt fasten-
 [ers and belts].
 Fairbrother, J., 650, Feb. 22, Drawing, &c. paragon wire.
 Fairfax, H., & Darlow, W., 2102, June 8, Applying
 [magnetism in manufacturing food, &c].
 Fairlie, F., & Freir, A., 773, Mar. 3, Bobbins.
 — R. F., 1841, May 19, Bogie engines.
 Farcot & Sons, & De Duclos, S., & Co. (Clark), 3845,
 [Nov. 4, Regulating, &c. engines and machinery].
 Faren, J., 586, Feb. 18, Scutching, &c. fibres.
 Farini, G. A., 4446, Dec. 22, Theatrical and gymnastic
 [apparatus].
 Faris, D., 3710, Oct. 26, Claps for books, &c.
 Farjon, A., 2115, June 9, Stoppers for fire-arms, bottles, &c.
 Farjon, L. A. (Brookes), 1994, June 1, Controlling flow
 [of water, &c].
 Farmer, J., 4052, Nov. 22, Printing machines.
 Farnsworth, S., 833, Mar. 6, Valves for water, &c.
 Farran, J., Goldschmid, E. A. J., & Horkheimer, O.,
 [4417, Dec. 21, Cutting velvets, &c].
 Farrar, E. J. & J., 2967, Aug. 24, Steam-boiler furnaces.
 — Jabez B., 2263, June 21, Flyers for spinning, &c.
 — John, J. & E., 2967, Aug. 24, Steam-boiler
 [furnaces].
 — Joseph, J. & E., 2967, Aug. 24, Steam-boiler
 [furnaces].
 Farrell, H. C., 3604, Oct. 16, Passenger register.
 Farrer, D., & Isitt, F., 3974, Nov. 16, Roller skates.
 Farries, E. J., 3552, Oct. 13, Propelling carriages & boats.
 — J. W., & Wood, W., 2576, July 20, Regulating
 [floats of paddle-wheels].
 Farris, W. H. (Lake), 310, Jan. 27, Water circulating bars.
 Farvis, W., 2077, June 5, Lever apparatus for railways.
 Farwell, W. B., 2126, June 10, Machine guns.
 Faucheux d'Humy, P. R. de, 1710, May 8, Combining
 [glass &c. for various purposes].
 Faugère, E., 2145, June 11, Weighing railway trucks, &c.
 Faulkner, H. D. (Glaskin), 3877, Nov. 8, Railway vehicles.
 Faulkner, J., 1800, May 14, Electrical appliances.
 Faure, C. A., 2946, Aug. 21, Thermo-electric batteries
 [and motors].
 — C. A., 3952, Nov. 13, Steam-boilers.
 Faure, M. J. F. R., & Kessler, J. L. (Sauvée), 2897,
 [Aug. 17, Sulphuric acid].
 Fawcett, R., & Firth, J. E., 1100, Mar. 25, Slide-valves.
 — S., 87, Jan. 9, Looms.
 — T. C., & Allen, C. B., 645, Feb. 22, Brickmaking.
 Fayad, J., 2608, July 22, Pen.
 Fayol, H. (Abel), 998, Mar. 18, Respiratory apparatus.
 Febvre, V., Pouget, & Bonniot (Clark), 4147, Nov. 30,
 [Operating sewing-machines].
 Feeny, V. I., 2228, June 17, Registering apparatus for
 [omnibuses, &c].

Feldman, J., 88, Jan. 9, Button fastenings.
 Felice, V., 1343, Apr. 14, Removing, &c. incrustation.
 Fell, A. G. (Lake), 4462, Dec. 22, Vegetable parchment.
 Fell, W. A., 1213, Apr. 3, Reaping and mowing.
 Fellingner, H. (Costa & Rinaldini), 1525, Apr. 26, Catch-
 [ing insects].
 Fellows, C., 2137, June 10, Copying letters, &c.
 Felt, G. H. (Newton), 600, Feb. 18, Ordnance.
 Fenby, J. B., 3584, Oct. 15, Hydraulic cranes; forging, &c.
 Fennessy, E., 868, Mar. 9, Sighting firearms, &c.
 Fenton, F. A. R., 1334, Apr. 13, Preparing flowers,
 [leaves, &c].
 — J. & W., & Newsome, C. H., 14, Jan. 1, Card
 [ing, &c. fibres].
 — W. & J., & Newsome, C. H., 14, Jan. 1, Card
 [ing, &c. fibres].
 Ferguson, H., & Arrowsmith, J. J., 3477, Oct. 7, Tube
 [stoppers].
 — T., 2129, June 10, Potato-planting machine.
 Ferguson, W. (Alexander), 3390, Sep. 29, Lowering, &c.
 [ships' boats].
 Fergusson, R., 3379, Sep. 28, Sizing and coloring yarns, &c.
 Ferry, G. H., & Bradford, J. B. (Haseltine), 484, Feb. 9,
 [Filling and corking bottles].
 Ferry, R., 3714, Oct. 26, Finely powdered coal.
 Fewings, J., & Sutcliffe, T., 1598, Apr. 30, Bottles and
 [stoppers].
 — J., & Sutcliffe, T., 3751, Oct. 28, Bottles and
 [stoppers].
 Fewster, W., 293, Jan. 26, Saving life and property at sea.
 Fidler, T. C., 4377, Dec. 17, Steam-boilers.
 Field, E., 2081, June 5, Steam-generators.
 — E., 3269, Sep. 18, Pumping machinery.
 — F., 2976, Aug. 25, Treating aniline colours.
 — F., & Talling, R., 1938, May 27, Insulating com-
 [pounds].
 — R., 3747, Oct. 28, Siphons for sewage tanks, &c.
 Fielden, I., 17, Jan. 1, Steam-engines.
 Financière de Paris, la Société (Johnson), 704, Feb. 25,
 [Treating alunite].
 — (Johnson), 1946, May 27,
 [Treating alunite].
 Findlay, J., & Jack, W., 930, Mar. 12, Distilling coal, &c.
 Finlay, W., 4185, Dec. 3, Furnace bars.
 — W., 4186, Dec. 3, Kilns and furnaces.
 Finlayson, A. W., 1819, May 15, Applying tension to
 [driving bands].
 Finney, J., 3804, Nov. 2, Medicine for cattle.
 Firth, E., 3140, Sep. 7, Washing machines.
 — J., 4078, Nov. 24, Taps for steam, &c.
 — J. E., & Fawcett, R., 1100, Mar. 25, Slide-valves.
 — William, 722, Feb. 26, Working and loading coal.
 — William, 769, Mar. 2, Sinking shafts; driving tunnels.
 — Wright, & Martin, E., 2014, June 2, Temples for
 [weaving].
 Fish, J. (Newton), 2614, July 22, Looms.
 Fish, W. S., 9, Jan. 1, Packing for stuffing-boxes, &c.
 Fisher, E., & Marshall, T., 901, Mar. 11, Carts, &c.
 — H., 1239, Apr. 6, Distilling sea-water, &c.
 — H., 3304, Sep. 21, Foundry drying stoves.
 — H., 3883, Nov. 9, Casting sinking cylinders, &c.
 — H., & Rutherford, J. H., 56, Jan. 6, Hot-air engines.
 Fisk, S. W. (Parker), 1246, Apr. 6, Braces.
 Fison, J. P., 2431, July 5, Thrashing machines.
 — J. P., & Holben, R. R., 1605, Apr. 30, Feeding
 [thrashing machines].
 Fisslthaler, J., 2868, Aug. 14, Perpetual calendars.
 Fitt, F. (Brookes), 2194, June 15, Watches, chronome-
 [ters, &c].
 Fitts, B. & Ball, P. (Newton), 1440, Apr. 20, Water-
 [meters].
 Fitz, E. E., 187, Jan. 18, Mounting globes.

Fitzgerald, D. G., 713, Feb. 26, Treating auriferous ores, &c.
 — D. G., 2481, July 9, Treating lead ores; [sulphuric acid.
 — D. G., 3807, Nov. 2, Signalling.
 Fitz-Patrick, J. J. (Lake), 42, Jan. 4, Drawers.
 Flachfeld, J. (Hollerbusch), 440, Feb. 5, Pencils.
 Flad, H. (Mills), 1770, May 12, Railway signals.
 Flagler, H. K. (Hunt), 290, Jan. 26, Welding tubes, &c.
 Fletcher, A. C. (Browne), 578, Feb. 17, Screw-propellers.
 Fletcher, T., 2290, June 23, Valves for drying cylinders.
 — T., 2927, Aug. 20, Gas and other furnaces.
 — T., 3954, Nov. 13, Bleaching fibres or fabrics.
 Fleury, F. G., 3247, Sep. 17, Water-meters.
 Flint, E., & Harlow, R., 3376, Sep. 27, Feeding steam-boilers.
 — H., & Burrows, J., 3314, Sep. 22, Tipping coal, &c.
 Fliteroft, T., 102, Jan. 12, Carding-engines.
 Floyd, J. N., 3605, Oct. 16, Steam-pumps.
 Flower, Honble. R., 1101, Mar. 25, Shearing animals; [pumps; rock-drills.
 Flynn, J. P., 2875, Aug. 14, Earthing and unearthing [celery, &c.
 — T. M. H., 4119, Nov. 27, Recording fares, &c., in [vehicles.
 Fogaty, T. & Jewell, J., 2141, June 11, Stowing, lower- [ing, &c. ships' boats.
 Folk, J. E. (Newton), 2352, June 28, Sewing-machines.
 Follett, J. L. (Murdoch), 1357, Apr. 14, Sewing-machines.
 Follows, F. W., Bate, J., & Lawrence, J., 3288, Sep. 20, [Cutting grass edges, knife-cleaning machines.
 Forbes, D. W., & Gibson, R. T., 2111, June 9, Furnaces.
 — D. W., & Baker, T. H., 2766, Aug. 5, Drying [hops, malt, &c.
 — P., & Dobbie, R., 3917, Nov. 11, American stoves.
 Ford, A., 4168, Dec. 2, Cleansing wool, &c.
 Ford, T. P., & Dick, T. S. (Morgan-Brown), 2261, June 21, [Suspending ships' berths, &c.
 Fordred, J., & Clarke, J. A., 2268, June 21, Cattle-food.
 Forest, T. B. de (Tongue), 4081, Nov. 24, Setting carriage [springs.
 Forges & Foundries Co. (Browne), 120, Jan. 12, Con- [verting iron scraps, &c. into steel.
 Fors, H. la, 4383, Dec. 17, Road locomotives and traction- [engines.
 Forster, T., 1930, May 26, Finishing threads.
 Forward, R. (Clark), 4160, Dec. 1, Paddle-wheel.
 Foster, B. H., 3671, Oct. 22, Filters.
 — D. Mc. G., 2688, July 29, Refrigerators, &c.
 — J. K. J., 2912, Aug. 18, Raising liquids; motive [mechanism.
 Foster, J. S. (Lake), 3143, Sep. 7, Steam, hot air, or [water engine, &c.
 Foster, R., 3421, Oct. 1, Cab-fare indicator.
 — W. R., 10, Jan. 1, Railway breaks.
 Foucard, C. (Leturmy), 4301, Dec. 11, Railway breaks.
 Fouillon, J. (Maes), 331, Jan. 28, Gloves.
 Foulis, W., 1036, Mar. 20, Cutting coal, &c.
 — W., 1140, Mar. 30, Cutting coal, &c.
 Foulkes, S. W. (Foulkes), 2980, Aug. 25, Curing foot [and mouth disease, &c.
 Foulkes, W. D. I. (Foulkes), 2980, Aug. 25, Curing foot [and mouth disease, &c.
 Foundries & Forges Co. (Browne), 120, Jan. 12, Con- [verting iron scraps, &c. into steel.
 Fournaise, P. (Christy), 1997, June 1, Water-proofing [fabrics.
 Fournereau, C., 4104, Nov. 26, Bottles for chemicals, &c.
 Fournier, C., 1580, Apr. 29, Tools for imitating wood [in painting.
 Fournier, E., & Meyer, E. (Clark), 928, Mar. 12, Lace.
 Fox, A. D. (Ladd), 2407, July 3, Tamping rails.
 Fox, G. & J. H., 309, Jan. 27, Finishing woollen fabrics.

Fox, H. B., 3311, Sep. 22, Stoppering bottles, &c.
 — H. B., & Chapman, T. J., 1347, Apr. 14, Bottling [aerated liquids.
 — J. H. & G., 309, Jan. 27, Finishing woollen fabrics.
 — W. H., 4245, Dec. 8, Ploughing land by steam-power.
 Foxwell, D., 282, Jan. 25, Shaping wire.
 Français Société Anonyme du Cuivre (Bousfield), 2042, [June 3, Photosulphuret of iron & hydrogen gas.
 — (Bousfield), 2084, June 5, Kilns or ovens.
 — (Bousfield), 3870, Nov. 6, Precipitating copper, [&c.
 France, E., & Bradsworth, A., 2163, June 12, Elastic webs.
 — W. H., 104, Jan. 12, Combing wool, &c.
 Francis, G. W., & Brownlow, D. R. (Lake), 340, Jan. 29, [Coating for metals.
 Francis, P. O., 652, Feb. 22, Preserving provisions.
 Franzini, M. M., 2831, Aug. 11, Field battery.
 Fraser, A., 1812, May 15, Composing, &c. type.
 — A. B., 3872, Nov. 6, Pumps.
 — J., 2990, Aug. 26, Rotary-engines.
 Frearson, J., 2005, June 1, Screws; tools for same.
 Freestone, A., & Vickers, E. C., 3925, Nov. 11, Boots, [shoes, &c.
 Freir, A., 584, Feb. 18, Batching jute and other fibres.
 — A., & Fairlie, F., 773, Mar. 3, Bobbins.
 Freise, E. F., & Bartels, G. C. F. (Hughes), 1764, [May 11, Dyeing.
 Fremion, L., & Lazon, A., 3263, Sep. 18, Fire-escapes.
 Freyburger, P. (Pfeiderer), 4116, Nov. 26, Kneading and [mixing substances.
 Friedlander, J., & Jachimowicz, C., 266, Jan. 23, Collect- [ing crops.
 Frith, S., 2648, July 26, Knitting machinery.
 — S., 2971, Aug. 24, Knitting machinery.
 Frömbing, W. (Child), 1202, Apr. 2, Measuring fabrics, &c.
 Frost, J., 3973, Nov. 15, Nut-lock for railway fish bolts.
 Fry, J. D., Barclay, R., & Baber, H., 1168, Mar. 31, [Printing on metal plates.
 Fry, J. E., & Nelson, G., 2114, June 9, Bessemer converters.
 Fryer, A., 3816, Nov. 3, Raising sunken vessels, &c.
 — A., & Alliot, J. B., 2225, June 17, Draining and [concentrating sugar, &c.
 — A., & Alliot, J. B., 4395, Dec. 18, Vacuum pans, [pumps, &c.
 Fryer, R. McC. (Newton), 4369, Dec. 16, Metal furnaces.
 Fuller, G. & J. C., 3340, Sep. 24, Galvanic-battery.
 — G. & J. C., 4270, Dec. 9, Galvanic elements.
 Fuller, J. B., & Crandall, J. N. (Lake), 3364, Sep. 25, [Magneto-electric machines.
 Fuller, J. C. & G., 3340, Sep. 24, Galvanic battery.
 — J. C. & G., 4270, Dec. 9, Galvanic elements.
 — T., 3547, Oct. 13, Syringing, &c. plants.
 Fullerton, J., 971, Mar. 16, Securing lids to boxes.
 Fulton, E., Blake, W., & Shaw, J. W., 4014, Nov. 19, [Packing cases.
 Fulton, H. H., Wooton, W. S., & Blake, J. G. (Lake), [1613, May 1, Writing desks or tables.
 Furrell, E. W. (Browne), 241, Jan. 21, Stand for charts, &c.
 Fürth, M. W., 1860, May 21, Teasling apparatus.
 Fyfe, A. L., 3624, Oct. 19, Dress suspenders.
 — A. L., & Harris, C., 405, Feb. 3, Dress improvers.
 — D. A., & Bowers, W. H., 101, Jan. 12, Gases.

G.

Gade, W. R., 2498, July 12, Saving life from shipwreck.
 — W. R., 2689, July 29, Saving life from drowning.
 Gadsby J., 2907, Aug. 18, Heating greenhouses, &c.
 Gaine, J. S., Dixon, F., & Rockliffe, W., 3313, Sep. 22, [Coating ships, &c.

Galland, N. J. (Barlow), 4079, Nov. 24, Beer.
 — N. J. (Barlow), 4418, Dec. 21, Filters.
 Galloway, C. J., & Holt, C. H., 2514, July 13, Steam-boilers.
 — C. J., & Beckwith, J. H., 2881, Aug. 16, Fixing boiler-tubes.
 — W., 3740, Oct. 28, Sinking pit-shafts.
 Gally, M. (Coddington), 1128, Mar. 27, Telegraphy.
 Galsworthy, W., 3641, Oct. 20, Steam-engines.
 Gamboni, P., 3075, Sep. 1, Motive-power engines.
 — P., 4334, Dec. 14, Motive-power machines.
 Gamgee, J., 3682, Oct. 23, Ice.
 — J., 4412, Dec. 20, Skating rinks.
 — J., 4519, Dec. 29, Producing ice and cold.
 Gammon, Deering, & Stewart, (Robinson), 2281, June 22, Reaping machines.
 Gandolfo, J., & Jarboe, J. W. (Clark), 3030, Aug. 28, Treating bone black; moulding sugar.
 Gandy, M., 52, Jan. 6, Paper substitute for wood, &c.
 — M., 173, Jan. 16, Railway wheels.
 — M., 1682, May 6, Railway wheels.
 Gannal, A. (Tongue), 1170, Mar. 31, Alimentary substances.
 Gard, W. G., & Wire, A. P., 2125, June 9, Extracting essence of meat.
 Gardner, C. F., & Blake, L. R., 206, Jan. 19, Boots & shoes.
 — D. R., 1126, Mar. 27, Treating timber.
 — E., Hughes, T., Dixon, G., & Maddox, J., 567, Feb. 16, Fringes.
 — E. V., & Pichler, S. F., 4486, Dec. 24, Raising [and lowering weights].
 — H. (Maynz), 889, Mar. 10, Boot and shoe tips.
 — H. (Wanzer), 1102, Mar. 25, Sewing-machines.
 — H. (Abercrombie), 1264, Apr. 7, Clamping window sashes.
 — H. (Abercrombie), 1788, May 13, Tenoning or relishing.
 — H. (Mowbray), 2132, June 20, Electric-battery.
 — H. (Gray), 3879, Nov. 8, Mowing and reaping.
 — H. (Hargreaves), 3961, Nov. 13, Ventilating railway carriages.
 Gardner, J. W. (Nicholson), 2162, June 12, Cutlery.
 Gardner, S., & Rees, E., 320, Jan. 28, Fire-bars.
 Garfield, W., 664, Feb. 23, Handles for jugs, teapots, &c.
 Garforth, W. E., & Walker, W., 884, Mar. 10, Expansion gear.
 Garland, H. P., 229, Jan. 21, Sewing-machines.
 — H. P., 2248, June 18, Sewing-machines.
 Garner, C., & Rycroft, A., 4112, Nov. 26, Umbrella frames.
 Garnier, E. M. T., 555, Feb. 15, Spring fastenings.
 Gartside, J. H., & Bradbury, C. T., 158, Jan. 15, Finishing fabrics.
 Gaskell, H., 1323, Apr. 12, Alkali.
 — J., 1705, May 7, Tool-holder for potters' lathes.
 Gatty, F. A., 124, Jan. 13, Printing & dyeing fabrics, &c.
 Gaudeau, E., 2040, June 3, Wiring bonnet & hat shapes.
 Gaudefroy, C. (Gedge), 433, Feb. 5, Asphaltic fabric.
 — C. (Gedge), 434, Feb. 5, Quilted fabric.
 Gauhe, A. (Kottgen), 619, Feb. 20, Coloring matter for [dyeing, &c].
 Gay, C. (Mewburn), 2360, June 29, Insulating jacket.
 Gay, P. E., 160, Jan. 15, Excavating and cutting rock, &c.
 Gear, A. S. (Morgan-Brown), 2779, Aug. 6, Street railway cars.
 Geary, F., 1900, May 24, Artificial fuel.
 — F., 2476, July 9, Training and testing dogs.
 Gedge, W. E. (Dufour), 20, Jan. 2, Agricultural machine.
 — W. E. (Cornely), 306, Jan. 27, Edging machines.
 — W. E. (Gaudefroy), 433, Feb. 5, Asphaltic fabric.
 — W. E. (Gaudefroy), 434, Feb. 5, Quilted fabric.
 — W. E. (Dallemagne), 922, Mar. 12, Skates.
 — W. E. (Molinier), 1117, Mar. 27, Tawing and dressing skins.

Gedge, W. E. (Guelton & Co.) 1553, Apr. 28, Imitation ["Faience Parisienne."]
 — W. E. (Collignon), 1905, May 25, Cast iron.
 — W. E. (Honore), 1923, May 26, Lubricating oil.
 — W. E. (Richard), 2144, June 11, Treating wood.
 — W. E. (Dubois), 2175, June 14, Consuming smoke.
 — W. E. (Paternotte & Larnoyeur), 2227, June 17, Railways and tramways.
 — W. E. (Le Bret), 2472, July 9, Signalling on trains.
 — W. E. (Manens), 2924, Aug. 19, Campaigning [canteen, &c].
 — W. E. (Mondain & Co.), 2992, Aug. 26, Boots [and shoes].
 — W. E. (Dallemagne), 3184, Sep. 11, Skates.
 — W. E. (Barennes), 3216, Sep. 14, Horse-shoe.
 — W. E. (Dufour), 3449, Oct. 5, Steam-generators.
 — W. E. (Rabache), 4024, Nov. 19, Ploughs.
 — W. E. (Schmidt), 4025, Nov. 19, Envelopes.
 — W. E. (Pérard), 4214, Dec. 6, Alarm or thief [detector].
 Gee, S. E. (Allin), 1973, May 29, Cutting, &c. pipes; [tapping nuts, &c].
 — W. M., 111, Jan. 12, Vessels and cases for wine, &c.
 Geflowksi, E. E., 3900, Nov. 10, Defacing postage stamps.
 Gégnon, P. E. (Clark), 3743, Oct. 28, Railway carriage [and other doors; guards].
 Geiger, T., & Niemann, G. (Hildebrandt), 316, Jan. 27, Tramways.
 Gelder, P. van, 732, Feb. 27, Removing smut from grain.
 Gendebien, F., 3348, Sep. 24, Steam-motor.
 Geneste, P. A., & Herscher, C. G. & E. (Johnson), 836, Mar. 5, Traps for separating liquids, &c.
 George, J. L. M., & Prioux, T., 2430, July 5, Ink pencils.
 — R., 808, Mar. 4, Stoves.
 — R., 1104, Mar. 25, Flower-pots, troughs, &c.
 — T. C. B. St., & Colborne, Hon. J., 3239, Sep. 16, Motive-power.
 Genies, M. E. A. (Barlow), 2069, June 5, Axle-boxes.
 Gerard, H. (Scott), 38, Jan. 4, Finishing fabrics, &c.
 Gerlach, G. T. (Wirth), 2174, June 14, Decomposing [distillates].
 German Water-Work Association (Wirth), 2884, Aug. 16, Water-meters.
 Gerrard, J., Eckersley, J., & Slater, W., 1035, Mar. 20, Sizing and dressing yarns.
 Gerring, M. H., 3407, Sep. 30, Working slide-valves.
 Gervais, A. (Dann), 1741, May 11, Culinary vessels.
 Gething, W. B., 566, Feb. 16, Filters, &c.
 Geyer, H., & Hartwick, G. G. (Clark), 812, Mar. 4, Pumps.
 Geyler, A. E., & Huet, A. J. (Johnson), 681, Feb. 24, Treating gases, liquids, &c.
 Giacomini, L. (Morgan-Brown), 3880, Nov. 8, Carding [wool, &c].
 Gibbons, C. B., & Allison, R., 2712, July 31, Preserving [solids and liquids].
 — J., & Moscrop, T. B. F., 2180, June 14, Railway signalling.
 Gibbs, G., 3332, Sep. 23, Stoppering bottles.
 Gibson, H., & Towell, M., 905, Mar. 11, Stocks and dies.
 — J., Howitt, T., & Walker, S., 103, Jan. 12, Stoppering bottles, &c.
 — R. T., & Forbes, D. W., 2111, June 9, Furnaces [or fire-places].
 Gidlow, T., & Abbott, J., 655, Feb. 23, Steam-boilers [and furnaces].
 Giesendorff, H. H. (Newton), 1186, Apr. 1, Folding [chairs, &c].
 Giffard, P. (Dick), 55, Jan. 6, Air spring & stuffing-box.
 — P. (Clark), 1889, May 22, Piston packings.
 — P. (Clark), 2064, June 4, Producing cold for ice [making, &c].

- Gilbee, W. A. (*Tiffany*), 1556, Apr. 28, Railway carriage [shoes].
 — W. A. (*Bondi*), 3335, Sep. 24, Railway signals.
 — W. A. (*Tilghman*), 4040, Nov. 20, Producing [designs by sand blast].
 Gilbert, W. H., 1784, May 13, Distilling alcohol.
 Gilchreest, R. (*Stevens*), 2978, Aug. 25, Ladders.
 Gill, D., 268, Jan. 23, Deodorising sewer gases.
 — D., 2621, July 23, Deodorising sewer gases.
 — F. N. G., 3687, Oct. 23, Beer.
 — J. & W., & Wainwright, H., 3296, Sep. 21, Lubricating spindles.
 — M., 2036, June 2, Stoppered bottle.
 — W. & J., & Wainwright, H., 3296, Sep. 21, Lubricating spindles.
 Gillett, D. C., 3210, Sep. 14, Raising sunken vessels.
 Gillman, A. W., & Spencer, S., 234, Jan. 21, Bottling [beer, &c.].
 — A. W., & Spencer, S., 2702, July 30, Bottling [beer, &c.].
 Gilmore, A., 4085, Nov. 25, Brake for bobbins of spinning [frames].
 — J., 386, Feb. 2, Turning over leaves of music.
 Gilmour, T., 164, Jan. 15, Safety-valves.
 Ginborn, von, Van Gulpen, & Lensing (Brewer), 2817, [Aug. 11, Caloric motor].
 Girdwood, H. M., 568, Feb. 17, Spinning.
 Glairot, frères, (*Dufrené*), 2815, Aug. 11, Treating sea- [wrack].
 Glaskin, E. E. (*Faulkner*), 3877, Nov. 8, Railway vehicles.
 Gledhill, G. & W., 179, Jan. 16, Railway signalling.
 — H., Watson, H., & Schofield, J., 3570, Oct. 14, [Finishing woven fabrics].
 — W. & G., 179, Jan. 16, Railway signalling.
 Glossop, G., 3349, Sep. 24, Steam-hammers.
 — J. T., 1200, Apr. 2, Signalling on railways.
 — J. T., 3277, Sep. 18, Railway rolling-stock.
 Glover, J., Richards, S., & Stubbs, J., 2136, June 10, [Doubling and winding yarns].
 Glover, J. W. (*Clark*), 3987, Nov. 16, Releasing horses [from carriages, &c.].
 Gluckstein, L., & Gosling, L., 3048, Aug. 31, Lighting [gasaliers or street lamps].
 Goddard, B., 1581, Apr. 29, Taps or valves.
 — F., & Massey, E., 1358, Apr. 14, Heating.
 — G. O., 783, Mar. 3, Roller skates.
 Godefroy, L., 3746, Oct. 28, Printing, &c. fabrics.
 Godener, J. (*Morley*), 2803, Aug. 9, Electric-telegraphs.
 Godfrey, S., & Howson, R., 4414, Dec. 20, Gas furnaces.
 Godley, G. (*Byron*), 550, Feb. 15, Carriage springs.
 — G. (*Timmis*), 3325, Sep. 23, Carriage springs.
 Goehring, C. (*Wirth*), 1135, Mar. 29, Treating yarns.
 Goff, R., & Stokes, R., 254, Jan. 22, Busk fastenings, &c.
 Goizot, L. H., Aubry, A., & Chauvin, F. M. A., 2410, [July 3, Electric submerged lamp].
 Golding, R., 2823, Aug. 11, Tobacco-pipes.
 Goldschmid, E. A. J., Horkheimer, O., & Farran, J., 4417, [Dec. 21, Cutting velvets, &c.].
 Goldsmith, G., 2639, July 24, Gas-meters.
 Goldsmith, G. (*Morgan-Brown*), 2922, Aug. 19, Lubricating material.
 — G., & Sherman, J. E. (*Morgan-Brown*), 2345, [June 28, Pumps].
 Goldstein, S., 1261, Apr. 7, Domestic ashpans.
 Goldsworthy, R. B., & Barlow, H. B., 2763, Aug. 5, Com- [municating motion: grinding and polishing].
 Goner, D. (*Vaughan*), 1993, June 1, Letter envelope.
 Gondolo, E. J. (*Johnson*), 2921, Aug. 19, Electric clocks.
 Gonin, L., & Sieber, C. H., 3064, Sep. 1, Printing & dyeing.
 Gooch, Sir F. S., 775, Mar. 3, Regulating flow of liquids.
 Good, J. (*Newton*), 876, Mar. 9, Drawing fibres.
 Goodall, W., & Horsman, P. S., 2300, June 23, Spinning, &c.
 Goode, W., 2651, July 27, Grass-mowing & reaping ma- [chines].
 Goodfellow, H., & Smith, J. P., 853, Mar. 8, Tiles.
 Goodwin, W., 559, Feb. 16, Facilitating transfer of grain, &c.
 — W., 3765, Oct. 29, Weighing machine, sack [filler, &c.].
 Goodyear, C. (*Johnson*), 3280, Sep. 18, Sewing boots.
 Gordon, J., 1729, May 10, Stop-cocks or valves.
 Gori, L., 852, Mar. 8, Stoppering bottles.
 Goring, T. M., 4171, Dec. 2, Tobacco-pipes, &c.
 Gosling, L., & Gluckstein, L., 3048, Aug. 31, Lighting [gasaliers or street lamps].
 Goubet, C. D., & Monroq, J. N., 1560, Apr. 28, Trans- [mitting motion].
 Goucher, R., 1248, Apr. 6, Railway couplings.
 Goudie, J. T., 712, Feb. 26, Life-saving garment.
 Gouget, A. (*Coste*), 2244, June 18, Furnace grates.
 Gough, H. D., & Altree, O., 3470, Oct. 6, Differential pulleys.
 Gouverneur, H. G., 452, Feb. 6, Reeds for harmoniums, &c.
 — H. G., 453, Feb. 6, Reeds for harmoniums, &c.
 Grafton, S., 735, Mar. 1, Affixing stamps and labels.
 Graham, G., & Allardyce, R. A., 3588, Oct. 15, Boat-davit.
 — J. C., 202, Jan. 19, Steam-boilers.
 Graissot, S. (*Mewburn*), 3787, Nov. 1, Silk fabric.
 Grandjean, M. J., 1995, June 1, Fire-arms.
 Grandjean, P. (*Bonneville*), 4318, Dec. 13, Warming [railway carriages].
 — P. (*Bonneville*), 4319, Dec. 13, Warming [railway carriages, &c.].
 — P. (*Bonneville*), 4510, Dec. 28, Warming [carriages].
 Granville, A., & Timmis, I. A., 643, Feb. 22, Treating hides.
 Grasser, C. (*Haseltine*), 2467, July 8, Casting metals.
 Gratton, T., & Beal, J., 1624, May 3, Locomotive, &c. [engines].
 Grauel, H., 4352, Dec. 15, Bottle-stoppers.
 Grauhan, F. W., 2557, July 17, Filtering water, sewage, &c.
 Grave, A. C. L. (*Dorat*), 210, Jan. 20, Gas-burners.
 Grave, J., 3157, Sep. 8, Water-closets.
 Gravelaine-Malorey, A. J., & Coly, L. (*Browne*), 1088, [Mar. 25, Purging steam-engine cylinders].
 Grawitz, W. J. S. (*Clark*), 1604, Apr. 30, Sulphide of [mercury].
 — W. J. S. (*Clark*), 1620, May 1, Aniline black; [dyeing].
 — W. J. S. (*Clark*), 4138, Nov. 29, Artificial pur- [purine, &c.].
 Gray, A. G. (*Gardner*), 3879, Nov. 8, Mowing & reaping.
 — E. (*Johnson*), 974, Mar. 16, Transmitting musical [vibrations, &c.].
 Gray, John (*Jelstrup*), 2502, July 12, Glove-sewing ma- [chines].
 — John McF., 1113, Mar. 27, Determining rule of [the road at sea].
 — Joseph H., 4463, Dec. 23, Reeds for weaving.
 — T. H., 1412, Apr. 17, Treating fibres for paper.
 — W., 1436, Apr. 20, Thrashing-machine beaters.
 — W., 2264, June 21, Clod-crashers.
 — W., 2577, July 20, Heating, &c. greenhouses and [vineries].
 — W., 2638, July 24, Elevating, &c. crops.
 Greathead, J. H., 4545, Dec. 30, Roller skates.
 Greaves, S. H., 1389, Apr. 16, Knives and forks.
 — T., 2019, June 2, Solitaires and studs; snap [fastenings for boots, &c.].
 — T. W., 1928, May 26, Solitaires.
 Green, C. H. (*Chapman*), 3484, Oct. 7, Lubricating oil.
 Green, G., 2896, Aug. 17, Dish for butter, sugar, &c.
 — John, 1406, Apr. 17, Excavating; winding wire [ropes].
 — Josiah, 44, Jan. 5, Fuel economiser for fire-grates.
 — T., 2447, July 7, Grass and turf cutting machines.

- Green, T., & Place, J. H., 3026, Aug. 27, Churns and washing machines.
 — W., 129, Jan. 13, Soaps.
 — W., 3891, Nov. 10, Soaps.
 Greene, J. D., 2241, June 18, Fire-arms.
 Greening, F., 2044, June 3, Soluble guncotton, &c.
 — F., 2059, June 4, Soluble guncotton compounds, &c.
 Greenlees, R. D., 2762, Aug. 5, Scotch bonnets or caps.
 Greenwood, A., & Keats, J., 1703, May 7, Hook for sewing-machines.
 — A., & Keats, J. & A., 1378, Apr. 15, Sewing-machines.
 — A., & Kritch, W. C., 1602, Apr. 30, Printing.
 — A., Wainwright, S., & Keats, J., 3123, Sep. 1, Sewing threads and cords.
 — E., & Kilburn, R. & J. E., 895, Mar. 10, Railway couplings.
 — E., Rigby, F., & Kilburn, J. E., & R., 4169, Dec. 2, Railway couplings.
 — F. A., 467, Feb. 8, Spinning.
 — J., 1171, Apr. 1, Steam-engines.
 Gregg, J., Marks, W. H., & Lund, T., 1372, Apr. 15, Tubes.
 Gregory, W., Maglone, J., Hathaway, W. A., & Snow, B. F. (Lake), 4456, Dec. 22, Journal box bearings.
 Greig, A., & Burton, R., 4453, Dec. 22, Tilling land.
 — D., & Eyth, M., 663, Feb. 23, Steam-engines.
 — D., 1563, Apr. 28, Cultivating land.
 — D., Short, J., & Weeks, J. G., 3111, Sep. 4, Air-compressors.
 — G., 1483, Apr. 22, Straw-elevators.
 Grellet, H. R., & Cocks, D. J., 4287, Dec. 10, Ships' rudders.
 Grether, E., 3249, Sep. 17, Card-cloth.
 — E., 3370, Sep. 27, Spinning throistles.
 Grice, J., 2660, July 27, Carriage axles.
 Griffin, E. H., 4534, Dec. 30, Separating potatoes.
 — N., 3402, Sep. 30, Shovels and like implements.
 — W., 1227, Apr. 5, Money tills.
 Griffith, F. W., & Byrne, G. P. (Lake), 4013, Nov. 18, Printing presses.
 Griffiths, E., & Absalom, W., 151, Jan. 14, Steering ships.
 — L., & Lewis, R., 3573, Oct. 19, Cleaning tin-plates.
 — R., 4002, Nov. 18, Ships; propelling ships.
 — T. & W., 3121, Sep. 6, Cleaning, &c. tin andterne plates.
 — T., Thompson, W. P., & Guion, —, 2402, July 2, Zinc sulphide.
 — T., Thompson, W. P., & Guion, —, 2460, July 8, Metallic sulphides and sulphates.
 — W. & T., 3121, Sep. 6, Cleaning, &c. tin andterne plates.
 Griggs, A. C., Pusey, R. A., & Davis, R. W. (Newton), 1785, May 10, Carriage wheels and axles.
 Grimshaw, W., 2229, June 17, Blocking hats.
 Grist & Parsons (Willson), 1940, May 27, Knitting machines.
 Groom, H., 4548, Dec. 30, Tins, &c. for preserved meats, &c.
 Gros, G., 4357, Dec. 16, Steel for striking fire.
 Grosclaude, L. A. (Weill & Harburg), 528, Feb. 12, Musical-boxes, &c.
 Groubman, C., 2805, Aug. 9, Stopping bottles.
 Grover, J. W., 772, Mar. 3, Spring washers.
 Grubb, C. R. E., 4529, Dec. 29, Cigar-lights.
 Grube, C. E. J., 2507, July 12, Cutting conical wheels.
 Grubinski, F. von, 2650, July 26, Reaping and mowing.
 Grünbaum, H., 4371, Dec. 17, Wiring, &c., hat and bonnet shapes.
 Grundy, G. (Allen), 4044, Nov. 20, Carburetters.
 Grüne, W., 2891, Aug. 17, Burning oils & their products.
 — W., 4030, Nov. 20, Storing, &c., mineral oils.
 Gubbins, R. R., 1658, May 4, Blowers; forges.
 — R. R., 4550, Dec. 30, Blowers for forcing air.
 Gudgeon, W., 582, Feb. 17, Preparing fibres.
 Guelton, A. J. B., & Co. (Gedge), 1553, Apr. 28, Imitation "Faience Parisienne."
 Guéneux, J., & Normand, E., 3185, Sep. 11, Making coloured impressions on tin-plate, &c.
 Guérin, P. (De La Perelle), 2437, July 6, Preserving food.
 — V. (Clark), 707, Feb. 26, Enlarging, &c. designs.
 Guion, —, Griffiths, T., & Thompson, W. P., 2402, July 2, Zinc sulphide.
 — —, Griffiths, T., & Thompson, W. P., 2460, July 8, Metallic sulphides and sulphates.
 Guitard, L. J., & Rolin, I. C. C. (Sauvée), 21, Jan. 2, Regulator for twisting machines.
 Guivet, J. A., 1217, Apr. 3, Knitting stockings, &c.
 — J. A., 1579, Apr. 29, Sewing-machines.
 Guldbrandsen, P. E., & Rettinger, J. C. (Morgan-Brown), 4123, Nov. 27, Glove sewing-machine.
 Gulland, J. K., 1251, Apr. 7, Rock-drills.
 Gullery, J., 2152, June 12, Spinning.
 Gülden, van, Lensing, & Von Gimborn (Brewer), 2817, Aug. 11, Caloric motor.
 Gumprecht, J., 2237, June 18, Advertising calendar.
 Gustafson, C. G. (Jensen), 2475, July 9, Screw nuts, &c.
 Guthrie, E., 2378, June 30, Concrete buildings.
 Gutta-percha Co., Continental Caoutchouc and (Wirth), 1772, May 12, Horse-shoes.
 Guyot, J. (Dann), 2038, June 3, Prime movers.
 Gye, L., & Moneriff, A. & L. N., 1435, Apr. 20, Fire-arms.

H.

- Haag, J. (Scott), 236, Jan. 21, Heating railway carriages.
 Haagen, C. van (Johnson), 47, Jan. 5, Sharpening drills.
 — C. van (Johnson), 912, Mar. 11, Grinding and sharpening.
 Haas, H. S., 2371, June 30, Cleansing & bleaching jute, &c.
 Hacking, T. & W. H., 1669, May 5, Weaving & folding cloth.
 — W. H. & T., 1669, May 5, Weaving & folding cloth.
 Haddan, H. J. (Edwards), 3453, Oct. 5, Printing from gelatine plates.
 — H. J., (Reeves & Train), 4375, Dec. 17, Lace or cord fasteners.
 — J. C., & Smith, H., 412, Feb. 4, Carving forks.
 — J. C., & Smith, H., 755, Mar. 2, Joining rails.
 — J. C. (Petillat), 851, Mar. 8, Mowing & reaping.
 — J. L., 1198, Apr. 2, Railways, engines & carriages.
 — J. L., 2836, Aug. 12, Substitute for buttons.
 Haddock, W. (Lake), 4513, Dec. 28, Spikes.
 Haden, F., 1420, Apr. 19, Cartridge cases.
 — W., 2711, July 31, Stone-breakers.
 Hadfield, R., 814, Mar. 4, Railway and other wheels.
 — R., 2051, June 4, Tramcar wheels.
 — R., & Mallaband, J., 3689, Oct. 25, Wheels.
 Hagenann, G. A. (Morgan-Brown), 964, Mar. 16, Water or cascade air-pumps.
 — G. A. (Morgan-Brown), 965, Mar. 16, Evaporating fluids.
 Haggard, W. N., 995, Mar. 18, Electro-magnetic signalling.
 Haggas, J. & W., 1591, Apr. 30, Looms.
 — W., 285, Jan. 25, Looms.
 — W. & J., 1591, Apr. 30, Looms.
 Hahn, H. (Daschbach), 3831, Nov. 4, Carburetting air.

- Hahn, I. (Imray), 2684, July 29, Rolling mills.
 — I. (Imray), 2903, Aug. 18, Rolling mills.
 — I. (Abel), 3151, Sep. 8, Cranes.
 Haigh, B., 1619, May 1, Waterclosets.
 — B., 1621, May 1, Cocks or valves.
 Hail, N. B., Bicknall, E. J., Westcott, N. W., & [Spencer, C. L. (Lake), 3000, Aug. 26, Knitting.
 Hainge, H. J., Davison, R., Walker, B. P., 2656, July 27, [Pavements, roads, &c.
 Hainsworth, M., 239, Jan. 21, Extinguishing fires.
 Hald, J. D. F. (Boethius), 1390, Apr. 16, Cutting cork stoppers.
 Hale, W. J., & Stanley, W., 1749, May 11, Letter-boxes, &c.
 Hales, E., & Clark, J., 4133, Nov. 29, Locks.
 Haley, H., & Mills, E. C., 265, Jan. 23, Gas-engines.
 — J., 2313, June 24, Card-setting and cards.
 Halfpenny, W. J., 2672, July 28, Tobacco-pipes.
 Hall, C. E., & Bainbridge, C. E., 1460, Apr. 21, Treating [peat, &c.
 Hall, C. H. (Blake), 2026, June 2, Steam-pumps.
 Hall, D. & J., 428, Feb. 4, Temples for looms.
 — James, 346, Jan. 29, Lime and cement kilns.
 — James, 3712, Oct. 26, Artificial hearthstones.
 — James & D., 428, Feb. 4, Temples for looms.
 — John, 731, Feb. 27, Discharging ores, &c.
 — Joseph, 3365, Sep. 25, Kilns.
 — Julius, 4468, Dec. 23, Fire-extinguishers.
 — S., & Cook, W., 1501, Apr. 23, Rendering tallow.
 — S. S., & Hobson, J., 1055, Mar. 23, Looms.
 — S. S., & Hobson, J., 2929, Aug. 20, Looms.
 — W., & Durrance, J. & R., 1131, Mar. 29, Driving bands.
 — W. E., 1808, May 14, Umbrellas and parasols.
 — W. J., Marshall, F. A., & Skinner, C. W., 530, [Feb. 13, Feed-heaters for boilers.
 Halladay, H., 4380, Dec. 17, Brace fittings.
 Hallam, S., & Lamb, J. W., 2607, July 22, Allowing [steam to escape from boilers, &c.
 Hallas, C. G., & Stevens, J., 4276, Dec. 9, Rolling steel [for cutlery, &c.
 Hallett, B., & Rood, G. A., 630, Feb. 20, Bicycles.
 — G., & Lester, H. E., 36, Jan. 4, Lowering boats.
 — G., & Lester, H. E., 3130, Sep. 7, Steering apparatus.
 Halley, G., 444, Feb. 5, Nut blanks.
 Hallowell, R., 2826, Aug. 11, Gas-motor engines.
 Hallidie, A. S., 1204, Apr. 2, Tramway & road car traction.
 Hallsworth, S., & Bailes, R., 573, Feb. 17, Treating sewage.
 — S., & Bailes, R., 1165, Mar. 31, Purifying gas.
 — S., & Bailes, R., 1752, May 11, Purifying gas.
 Halsey, E. J. (O'Brien), 3464, Oct. 5, Stopping bottles.
 Halsey, L. B., & Deaderick, R. H. (Jensen), 3994, [Nov. 17, Steam-boiler flues.
 Halsted, W. (Morgan-Brown), 2790, Aug. 7, Spark [arresters, &c.
 Hamblet, J., & Davies, G., 3556, Oct. 13, Dies or moulds [used in brick-making, &c.
 Hamburg-American Sewing-Machine Co. (Jensen), 26, [Jan. 2, Printing metals.
 Hamer, E., & Metcalfe, J. & R., 2984, Aug. 25, Econo- [mising fuel in locomotives, &c.
 Hamilton, A. J., & James, C. H. (Keller), 1322, Apr. 12, [Felted articles.
 — J. B., Wade, G. E., Okes-Voysey, R. W., & [Balfour, A. J., 1585, Apr. 29, Musical instruments.
 — J. B., Wade, G. E., & Okes-Voysey, R. W., [2029, June 2, Musical instruments.
 Hampton, T., 3169, Sep. 9, Looking-glasses.
 Hance, A., Buckhout, J. D., & Hornum, W. H. (Bonne- [ville), 2760, Aug. 5, Fare registers.
 Handy, R., 2883, Aug. 16, Preparing cotton for spinning.
 Handyside, H., 376, Feb. 2, Chains or cables.
 — H., 4114, Nov. 26, Railway rolling stock.
 — J. B., 1702, May 7, Grinding metallic surfaces.
 Handyside, J. B., 3865, Nov. 6, Grinding metallic surfaces.
 Hanks, H., 3756, Oct. 29, Treating neuralgia, face-ache, [nervousness, &c.
 Hannen, S. A., 1627, May 3, Games ("Targetier.")
 Hans, M. L. P., & Hermary, H. A. H., 2147, June 11, [Barometers.
 Hansen, R. J. M. (Holten), 1706, May 7, Writing or [printing instruments.
 Hanson, J., 2675, July 28, Treating sewage.
 — J. T., & Batho, W. F., 3005, Aug. 26, Wall-papers.
 — W., & Crabtree, W., 3066, Sep. 1, Looms.
 Harburg, H., & Weill, L. (Grosclaude), 528, Feb. 12, [Musical-boxes, &c.
 Hardaker, J., 2532, July 14, Loom temples.
 Harding, G. P., 3373, Sep. 27, Locomotive tram-cars.
 Harding, G. P., & Johnson, J. R. (Morgan-Brown), [1335, Apr. 13, Treating sewage.
 — G. P., & Johnson, J. R. (Morgan-Brown), 2119, [June 9, Type-writing machines.
 — G. P., & Johnson, J. R. (Morgan-Brown), 2250, [June 19, Tramway rolling-stock.
 Harding, T. R. & T. W., 4178, Dec. 2, Pins, combs, gills, [fallers, &c.
 — T. W. & T. R., 4178, Dec. 2, Pins, combs, gills, [fallers, &c.
 Hardisty, J., 3461, Oct. 5, Forging or stamping metals.
 Hardy, T. E. (Minns), 687, Feb. 25, Artificial leather.
 Hare, G., 1699, May 7, Photographic changing box, &c.
 — G. S., & Barton, W., 1385, Apr. 16, Lubricators.
 — J., 2203, June 15, Marking at billiards, &c.
 Harfield, W. H., 909, Mar. 11, Capstans and windlasses.
 — W. H., 910, Mar. 11, Hoisting and lowering.
 — W. H., 911, Mar. 11, Capstans; cable holders [and stoppers.
 Hargreaves, E. E. (Gardner), 3961, Nov. 13, Ventilating [railway carriages.
 Hargreaves, H. E., 353, Jan. 30, Indicating speed of ships.
 — J., 147, Jan. 14, Sulphates.
 — J., & Robinson, T., 1576, Apr. 29, Sulphates [of soda and potassa.
 Harlow, B., 1068, Mar. 24, Boilers for heating apparatus.
 — B., 4402, Dec. 18, Moulding pipes, elbows, &c.
 — P. J. S., 1356, Apr. 14, Hames for horses.
 — R. (Shaw), 3430, Oct. 2, Valves.
 — R., & Flint, E., 3376, Sep. 27, Feeding steam-boilers.
 Harmer, J. N., & Wright, A. S., 2242, June 18, Watch- [maker's peg wood, &c.
 Harper, J. R., 1652, May 4, Inhaling, disinfecting and [ventilating; medical baths.
 — R. R., 336, Jan. 28, Electric-telegraphs.
 Harpham, T. C. & W., & Thomson, W., 3177, Sep. 10, [Hides and skins.
 — W. & T. C., & Thomson, W., 3177, Sep. 10, [Hides and skins.
 Harpin, H., 3300, Sep. 21, Bricks.
 Harries, B., 1367, Apr. 15, Gauging supply of water.
 — T., & Redford, G., 4528, Dec. 29, Artificial fuel.
 Harrington, J., 1364, Apr. 15, Chess and draught boards.
 — J., 2023, June 2, Roller skates.
 — J., & Watkins, D., 759, Mar. 2, Roller skates.
 Harris, A. E., 1222, Apr. 5, Lock-nuts.
 — C., & Fyfe, A. L., 405, Feb. 3, Dress improvers.
 — D., 860, Mar. 9, Billiard tables.
 — F. (Cook & Heath), 3375, Sep. 27, Prisons, &c., [and alarm attachments for same.
 — H., 4188, Dec. 3, Stays and corsets.
 — I. B., 2957, Aug. 23, Machine belting.
 — I. B., 2982, Aug. 25, Belt fasteners.
 — P., 4432, Dec. 22, Closing and fastening boots.
 — P., 4467, Dec. 23, Neck and chest protector.
 — R. E., 1998, June 1, Signalling at sea.
 — W. R., 2540, July 15, Healds or harness for looms.

- Harrison, C., 363, Jan. 30, Umbrella runners.
 — C., 4470, Dec. 23, Skates and sledges.
 — F. A., & Priestland, C., 3667, Oct. 21, Lever [buckles].
- Harrison, G. W. (Lake), 2774, Aug. 5, Harvesters.
 Harrison, H., 1056, Mar. 23, Fastening rail ends.
 — J. E., & Knott, S., 3572, Oct. 14, Cop-tubes.
 — S. L., 461, Feb. 6, Axles for railway cars.
 — T., 3206, Sep. 13, Pavement.
 — W., 1051, Mar. 22, Spindles; fixing door [handles; escutcheons].
 — W., & Mabson, J., 1575, Apr. 29, Sewing-machine [chines].
 — W. H., 749, Mar. 1, Boxes for tooth powders, &c.
- Hart, G. W., & Bennett, J., 1976, May 29, Alkalies & acids.
 — H. W., 1219, Apr. 3, Biscuits.
 — H. W., 3434, Oct. 2, Biscuits.
 — M. J., 1653, May 4, Handles for tea-pots, &c.
- Hartley, J., & Sugden, Z., 3511, Oct. 9, Boilers for heating water.
 — J. W., 2366, June 29, Engine governors.
- Hartwick, G. G., & Geyer, H. (Clark), 812, Mar. 4, Pumps.
- Harvey, J., 222, Jan. 20, Two-wheeled carriages.
- Harvie, E., 1348, Apr. 14, Carriage heads.
- Harwood, C., & Warrington, T. A., 3802, Nov. 2, Cutting [cork, &c].
 — C., & Warrington, T. A., 4422, Dec. 21, Valve [for cleaning bottles, &c].
- Harwood, G. S. (Burlock), 2025, June 2, Carding machine [chines; treating fibres].
 — G. S. (Burlock), 3796, Nov. 1, Carding-machine [chines].
- Haseltine G. (McVicar & McVicar), 27, Jan. 2, Teaching.
 — G. (Smythe), 422, Feb. 4, Balanced slide-valves.
 — G. (Bradford & Ferry), 484, Feb. 9, Filling [and corking bottles].
 — G. (Winchester & Phelps), 485, Feb. 9, Rock-drills.
 — G. (Keene & Sawyer), 700, Feb. 25, Surfaces [for steps, &c].
 — G. (Cleveland Paper Box Machine Co.), 1008, [Mar. 18, Paper boxes].
 — G. (Toppan, Meloon, Chapin & Meloon), 1009, [Mar. 18, Wood-planing].
 — G. (Lidgerwood), 1086, Mar. 25, Steam-engines.
 — G. (Norris), 1163, Mar. 31, Cypher correspondence.
 — G. (Edson), 1181, Apr. 1, Recording steam-gauges.
 — G. (Bingham), 1182, Apr. 1, Burning bricks, &c.
 — G. (Young), 1317, Apr. 10, Match splints.
 — G. (Selleck), 1361, Apr. 14, Harvesters.
 — G. (Sutro), 1479, Apr. 22, Device for holding [thread, &c].
 — G. (Clough), 1640, May 3, Corkscrews.
 — G. (Edson & Silliman), 1677, May 5, Paddle-wheels.
 — G. (Lyman), 1781, May 13, Thread spools; [pail-handles, &c].
 — G. (Bennett), 2253, June 19, Targets.
 — G. (Miller & Hill), 2314, June 24, Bag fasteners.
 — G. (Kitson), 2433, July 5, Opening cotton.
 — G. (Grasser), 2467, July 8, Casting metals.
 — G. (Wickersham), 3444, Oct. 4, Nail machines.
- Hasenclever, R., 2109, June 9, Chlorine.
- Haskell, A. G., 2662, July 27, Life-preserving bed.
- Haslam, J. P., 3029, Aug. 28, Carding-engines.
 — W., & Riley, J., 1143, Mar. 30, Winding yarns.
- Hassall, A. H., & Hehner, O., 2706, July 30, Treating wine.
- Hastie, J., 1742, May 11, Steam-steering apparatus.
- Hastings & Johnson (Johnson), 1249, Apr. 6, Measuring rules.
- Hatchard, S., & Talbot, F., 1095, Mar. 25, Hearses and [biers].
- Hathaway, W. A., Snow, B. F., Gregory, W., & Maglone, J. (Lake), 4456, Dec. 22, Journal-box bearings.
- Hattersley, T. K., 1546, Apr. 27, Steam-engines.
 — R., 1566, Apr. 29, Composing, distributing, &c. type.
- Hawkins, J., & Ritchie, G., 3508, Oct. 9, Doors & windows.
- Hawley, J. S. (Clark), 3063, Aug. 31, Washbasin vent-clearer.
- Hawley, W., & Sleigh, J., 2085, June 7, Carriage handles.
- Haworth, J., 4158, Dec. 1, Roller skates.
 — W., 1959, May 28, Rolling tea leaf.
 — W., & Thomson, J., 3937, Nov. 12, Weaving [bags, &c].
- Haydon, J., 1288, Apr. 9, Railway wheels.
- Hayes, E., 3627, Oct. 19, Tilling land.
 — I. R., & Somerset, J., 1020, Mar. 19, Lubricating [axles, &c].
 — I. R., & Somerset, J., 1021, Mar. 19, Railway chairs.
- Hayhoe, H. P., 3614, Oct. 18, Removing paint, &c.
- Haythorne, J., 3033, Aug. 28, Purifying, &c. iron.
- Hayward, G., Knap, C., & Taunton, R. H., 208, Jan. 19, [Wrought iron tubes].
 — J., & Hoyland, W., 3941, Nov. 12, Umbrellas [and parasols].
 — P., & Middleton, W., 493, Feb. 10, Melting, &c. metals.
- Heap, J., 1137, Mar. 30, Screwing and tapping nuts, &c.
- Heape, R. T., 117, Jan. 12, Carding-engines.
 — R. T., 2555, July 16, Carding-engines.
 — W., 1586, Apr. 29, Sewing-machine needles.
- Heard, J. R., 489, Feb. 10, Horse-shoe and other nails.
- Hearson, C. E., & Kidd, J., 4265, Dec. 9, Gas-burners.
- Heath, J. W., & Cook, J. B. (Harris), 3375, Sep. 27, [Prisons, &c. and alarm attachments for same].
- Heath, L., 1228, Apr. 5, Boots and shoes.
 — S., 2542, July 15, Punching leather, cloth, &c.
 — W., 1586, Apr. 29, Sewing-machine needles.
 — W. H. (Young), 3385, Sep. 28, Button-fasteners.
- Heaton, D. (Bousfield), 18, Jan. 1, Button-fasteners.
 — D. (Bousfield), 3686, Oct. 23, Instrument for [attaching buttons].
- Heaton, E., 3040, Aug. 30, Punching boiler-plates, &c.
- Hebblethwaite, G. H., 2857, Aug. 13, Unwoven fabric.
 — G. H., 4305, Dec. 11, A new fabric.
- Heberlein, J. (Imray), 676, Feb. 24, Railway breaks.
- Hecht, S., & Co. (Blumfeld), 4149, Dec. 1, Pipes and [tubes for smoking].
- Heiden, H. M., & Hill, C. A. (Morgan-Brown), 966, [Mar. 16, Photographic printing].
- Hedderwick, P. D., 3459, Oct. 5, Skates.
 — P. D., 4349, Dec. 15, Roller skates.
- Hedges, K. W., 1536, Apr. 27, Steam-boilers.
- Heeley, S., 1617, May 1, Railway couplings.
- Hehner, O., & Hassall, A. H., 2706, July 30, Treating wine.
- Heilborn, F. X. F., 1324, Apr. 12, Spring earring.
 — F. X. F., 2969, Aug. 24, Dress and ornament [fastenings, &c].
- Heinrichs, L. (Schwalbe), 3145, Sep. 7, Sewing straw-plait, &c.
- Heinz, C., 2424, July 5, Kneading trough.
- Heinzerling, C., 2669, July 28, Bichromate of potash; [iodine and bromine].
 — C., & Liepmann, H., 2495, July 12, Caoutchouc & gutta-percha.
 — C., & McGowan, G., 1712, May 8, Anthracene.
- Helie, L. A. M. (Newton), 2936, Aug. 20, Cooking.
- Hellier, H. G., 1233, Apr. 5, Lamps, &c.
- Hellyer, S. S., 2620, July 23, Preventing waste of water.
- Helm, T., Abbott, T., Ainsworth, T., & Ellis, J., 2908, [Aug. 18, Dobby for looms].

- Helson, M.* (Sauvée), 2797, Aug. 9, Treating cinders or [slags].
- Helwig, A., & Cox, P. E.*, 4455, Dec. 22, Implement for [opening cans, &c.]
- Hely, A. A.*, 3098, Sep. 3, Food for cattle, &c.
- Hemsted, J.*, 3514, Oct. 9, Lifting, &c. sunken ships.
- Hempsted, R., & Hircok, J. T. M.*, 1851, May 19, Horse-hoes.
- Hénard, E.* (De Pass), 2500, July 12, Fire-arms.
- Henderson, A. C.* (*Vaillant*), 1654, May 4, Motive-power.
- *A. C.* (*Picard & Cheynet*), 1999, June 1, [Cloth].
- *A. C.* (*Collière, Malinet, & Co.*), 2730, Aug. 3, [Woollen yarn].
- *A. C.* (*Legrand*), 3052, Aug. 31, Combined [blotting-pad, paper-weight, &c.]
- *A. C.* (*Boivin*), 3362, Sep. 25, Canopies or [hoods].
- *A. C.* (*Picard and Laurent*), 3369, Sep. 27, [Aërial vessel].
- *A. C.* (*Moulton, Damon, Rice, & Parker*), [3916, Nov. 11, Warping].
- *D.*, 4187, Dec. 3, Filling seeds, &c. into [pockets or envelopes].
- *R.*, 3565, Oct. 14, Screw-propellers; paddle [and water-wheels].
- *R.*, 4363, Dec. 16, Mathematical and philo-[sophical instruments].
- *T.*, 1529, Apr. 26, Furnace grates, &c.
- *W.*, 3561, Oct. 14, Dressing stone, &c.
- *W. C.*, 1404, Apr. 17, Vulcanite.
- Henley, J. E.*, 2947, Aug. 21, Lifeboats, &c.; steering.
- *W. T.*, 4115, Nov. 26, Telegraph cables, &c.
- Hennessey, P. B.* (Brewer), 3078, Sep. 1, Safe time locks.
- Henning & Schnabel* (Brunner), 505, Feb. 11, Portable [cranes].
- Henriot, F. P.*, 675, Feb. 24, Water-level indicators.
- Henry, M.* (*Bouchotte*), 1145, Mar. 30, Grinding corn.
- *M. (Huret)*, 1983, May 31, Propelling carriages, [boats, &c.]
- Henson, H. H.*, 575, Feb. 17, Paving.
- Henwood, F. G., & Davis, H. H.*, 2037, June 3, Railway [buffers].
- Heppenstall, W., & Brookes, I.*, 2719, July 31, Feeding [young animals].
- Hequet, T. A.*, 2564, July 17, Electro-magnets.
- Herbepin, L. A. P.* (Bonneville), 3978, Nov. 16, Measur-[ing water].
- Herbert, H. J.*, 1960, May 28, Advertising.
- Herland, G. J. L.* (Alexander), 3681, Oct. 23, Treating [sea-weed].
- Hermagis, J. H.* (Morgan-Brown), 937, Mar. 13, Photo-[graphic apparatus].
- Hermay, H. A. H., & Hans, M. L. P.*, 2147, June 11, [Barometers].
- Heronimos, Y.*, 3491, Oct. 8, Raising sunken ships.
- Herring, J., & Butt, J. M.*, 4126, Nov. 27, Purifying gas.
- Herrmann, L.* (Wise), 2138, June 10, Floors for malt-[kilns].
- Herscher, C. G. & E., & Geneste, P. E.* (Johnson), 826, [Mar. 5, Traps for separating liquids, &c.]
- *E. & C. G., & Geneste, P. E.* (Johnson), 826, [Mar. 5, Traps for separating liquids, &c.]
- Herts, A. C.* (*Herts*), 3652, Oct. 21, Tables for cutting [out].
- Herts, J.* (*Herts*), 3652, Oct. 21, Tables for cutting out.
- Herzen, A.* (Stark), 3080, Sep. 2, Treating skins and [hides].
- Hes, J. A.*, 2575, July 20, Artificial fuel.
- Heshuysen, W. F.* (Hughes), 924, Mar. 12, Moving rail-[way rolling stock].
- Hesketh, W. J., & Pether, W. R.*, 3742, Oct. 28, Stop-valve.
- Hesling, J.*, 548, Feb. 15, Fulling or milling.
- Hess, C. M.* (*Hess*), 3613, Oct. 18, Composition buttons.
- Hess, R.*, (*Hess*), 3613, Oct. 18, Composition buttons.
- Hesse, E.*, 4197, Dec. 4, Marking, &c. ivory buttons.
- Hessel, C.* (*Pregardan*), 1636, May 3, Steam-boilers.
- Heurtier, J. J.*, 987, Mar. 17, Capsuling bottles.
- Hewitt, C., & Heys, M. H.*, 2726, Aug. 3, Shaping staves.
- *E., & Marshall, N.*, 4293, Dec. 10, Circular ma-[chines for looped fabrics].
- *J. B.*, 182, Jan. 16, Pole-axe.
- *W.*, 4250, Dec. 8, Screw-propellers.
- Hey, J. E., & Hill, J.*, 362, Jan. 30, Ventilators.
- Heydemann, R., & Klinkmann, A.*, 2659, July 27, Potato [diggers].
- Heyl, G. F.* (Johnson), 2972, Aug. 24, Compositions for [ship's bottoms, &c.]
- Heys, M. H., & Hewitt, C.*, 2726, Aug. 3, Shaping staves.
- Heywood, E., & Mather, C.*, 1877, May 22, Embank-[ments, &c.]
- *J.*, 3660, Oct. 21, Painting blind-laths, &c.
- Hibry, J.* (Newton), 1185, Apr. 1, Spinning.
- Hickisson, J.*, 557, Feb. 16, Exhibiting articles for sale.
- Hicks, J. J.*, 2701, July 30, Hydrometers.
- Higginbottom, J., & Hutchinson, E.*, 908, Mar. 11, Scour-[ing grain].
- *J., & Hutchinson, E.*, 1193, Apr. 2, Scour-[ing grain].
- *J., & Hutchinson, E.*, 1911, May 25, Scour-[ing grain].
- Higgins, F., & Theiler, R.*, 423, Feb. 4, "Tell tale" clocks.
- Higginson, A.*, 108, Jan. 12, Motive-power; pumps.
- *A.*, 2463, July 8, Engines and pumps.
- Higham, A. J.*, 1467, Apr. 22, Clocks, &c.
- *A. J.*, 2917, Aug. 18, Clocks and timekeepers.
- Hildebrandt, A.* (*Niemann & Geiger*), 316, Jan. 27, Tram-[ways].
- Hilditch, H.*, 4101, Nov. 26, Hydraulic-engines.
- Hilf, M.* (Johnson), 1856, May 20, Permanent way.
- Hill, A. C., Ingham, W. P.*, 3253, Sep. 17, Clay retorts.
- Hill, C. A., & Hedden, H. M.* (Morgan-Brown), 966, [Mar. 16, Photographic printing].
- *C. G., & Miller, A. M.* (Haseltine), 2314, June 24, [Bag fasteners].
- Hill, E. J., & Clark, J. L.*, 907, Mar. 11, Stowing and [lowering ships' boats].
- *G.*, 1040, Mar. 22, Gas-meters.
- *H.*, 2667, July 28, Hair-pins.
- *J.*, 1745, May 11, Expressing or separating liquids.
- *J.*, 4111, Nov. 26, Extracting fluids from barrels, &c.
- *J., & Hey, J. E.*, 362, Jan. 30, Ventilators.
- *J. W., & Cameron, H.*, 2376, June 30, Horse-rakes.
- *R.*, 2454, July 8, Furnaces.
- *R., & Collingwood, T., & E.*, 3452, Oct. 5, Couplings.
- *S.*, 1093, Mar. 25, Back-sight for rifles.
- *S.*, 3967, Nov. 15, Back-sights for rifles.
- *W. F.*, 3738, Oct. 28, Candle-wick yarn, &c.
- Hilliard, J. B., & Watson, J.*, 1557, Apr. 28, Skates.
- *R. H.*, 3692, Oct. 25, Trusses for hernia, &c.
- Hillman, W.*, 3462, Oct. 5, Sewing-machines.
- Hills, F. C.*, 1895, May 24, Purifying gas.
- Hiltbrunner, J.*, 1148, Mar. 30, Equilibrium saloon boat.
- Hilton, R. L.*, 1208, Apr. 3, Heating water; generating [steam].
- *R. L., & Stafford, T.*, 2538, July 15, Setting out [carpentry and joiners work].
- *W., & Clarke, F. R.*, 830, Mar. 6, Steam-traps.
- Hinde, W. J.*, 1565, Apr. 28, Bolt or catch.
- *W. J.*, 3763, Oct. 29, Bolts or catches.
- Hindley, J.*, 2670, July 28, Lubricating spindles, &c.
- Hinds, W., & Nicoll, D.*, 2440, July 6, Fog-signals.
- Hircok, J. T. M., & Hempsted, R.*, 1851, May 19, Horse-hoes.

- Hirsch, H., 4479, Dec. 23, Screw-propellers.
 — J. (*Hirsch*), 576, Feb. 17, Screw-propellers.
Hirsch, M. (*Hirsch*), 576, Feb. 17, Screw-propellers.
Hirschfeld, L., 1496, Apr. 23, Binding and bordering [bonnets, &c.
Hirzel, G. A., 2468, July 9, Disintegrators.
Hiscock, W., 1242, Apr. 6, Letter balances.
Hitchins, R. W., 1665, May 4, Ceilings.
Hitchon, J. H., 1743, May 11, Grinding cards of card- [ing-engines.
Hlubek, P. (*Lake*), 2181, June 14, Engines.
Hoadley, T., 4124, Nov. 27, Friction-roller bearings.
Hobbs, A. C., & *Orcutt, J.* (*Brookes*), 125, Jan. 13, [Cartridges.
Hobday, J., 2637, July 24, Paper-making.
Hobson, A. H. G., 2142, June 11, Lock-nut.
 — J., & *Hall, S. S.*, 1055, Mar. 23, Looms.
 — J., & *Hall, S. S.*, 2929, Aug. 20, Looms.
Hodgetts, E. W., 2807, Aug. 10, Portable band or tie.
Hodgkin, J. E., & *Neuhaus, M.* (*Blake*), 3867, Nov. 6, [Steam-pumps.
Hodgson, C., 1740, May 11, Imitation snow slopes and [moving vehicles thereon.
 — J. R., & *Sweet, T. W.*, 1478, Apr. 22, Life-buoys, [boats, &c.
 — R., 1405, Apr. 17, Casks.
Hodson, C., 371, Feb. 1, Floor, sash, and bench cramp.
 — R., 3076, Sep. 1, Apparatus for burning saw- [dust, &c.
 — R., 4458, Dec. 22, Rotary-engines.
 — V., 4240, Dec. 7, Extinguishing fires.
Hoe, R. M. (*Newton*), 4231, Dec. 13, Preparing paper [for printing.
 — R. M. (*Newton*), 4386, Dec. 18, Printing machinery.
Hogg, J. B., 1172, Apr. 1, Gas torch or fire-lighter.
Holben, R. R., & *Fison, J. P.*, 1605, Apr. 30, Feeding [thrashing machines.
Holden, J., *Armstrong, J.*, & *Dean, W.*, 4433, Dec. 22, [Arranging bogies, &c. in locomotives.
Holden, O. (*Lake*), 3785, Oct. 30, Alloys for protecting [surfaces from oxidation, &c.
Holding, G. R., 1446, Apr. 21, Scissors & shears sharpener.
 — J., 1568, Apr. 29, Looms; loom temples.
 — J., 4254, Dec. 8, Loom healds.
 — J., & *Collier, J.*, 19, Jan. 2, Coppers & other boilers.
Holderff, R., & *Brückner, W.* (*Lake*), 1313, Apr. 10, [Hot-air engines.
Holdsworth, S., 2595, July 21, Tufted carpets and piled [fabrics.
Holland, J. C. (*Oppenheimer*), 1707, May 7, Needles.
Holland, R., 393, Feb. 3, Fastening wheel-tyres.
 — S., 886, Mar. 10, Saturating cops or yarn.
 — W., 3008, Aug. 27, Draw-bar couplings.
 — W., & *Myers, H.*, 34, Jan. 4, Umbrellas, &c.
Hollerbusch, M. (*Flachfeld*), 440, Feb. 5, Pencils.
Holliday, T., 1031, Mar. 20, Dyeing and printing.
 — T. (*Schultz*), 498, Feb. 10, Printing fabrics.
 — T. (*Schultz*), 499, Feb. 10, Bleaching fabrics.
Hollings, A., 3809, Nov. 2, Hydraulic-presses.
 — A., & *Fairbank, J.*, 2818, Aug. 11, Belt fast- [eners and belts.
Hollis, A. J. B., 2128, June 10, Fire-arms.
Holme, C., 3270, Sep. 18, Holder & fastener for tickets, &c.
Holmes, F., 2325, June 25, Fire-lighters.
 — F., & *Hopkinson, W. S.*, 3114, Sep. 6, Cutting [and splitting wood, &c.
 — F. H., 3426, Oct. 2, Fog-signals, &c.
 — James M., (*Porter*), 2311, June 24, Springs for [carriages, &c.
 — James M. (*Sharp*), 2387, June 30, Gas-stoves.
 — James M. (*Atwood*), 3211, Sep. 14, Compress- [ing metal waste.
Holmes, James M. (*Porter*), 3789, Oct. 30, Springs for [carriages, &c.
 — James M., & *Walker, B. P.*, 4039, Nov. 20, [Feeding fuel to furnaces, &c.
 — James S., 1473, Apr. 22, Shirt-studs, &c.
 — Joseph E. & *Payton, W.*, 343, Jan. 29, Saws and [sawing machinery.
 — Joseph E., & *Payton, W.*, 1567, Apr. 29, Steam [and other engines; raising, &c. liquids.
 — N. J., 2806, Aug. 10, Audible alarm signals.
 — R. R., 122, Jan. 13, Aërated liquors.
Holroyde, W. J., 409, Feb. 8, Dredger grapples.
Holt, C. H., & *Galloway, C. J.*, 2514, July 13, Steam- [boilers.
 — H. P., 951, Mar. 15, Constructing buildings.
 — H. P., 1980, May 31, Preventing damage, &c. from [breaking of chains, &c., in hoists & shafts.
 — H. P., 2207, June 16, Steam-engines; valves.
 — H. P., 4316, Dec. 13, Compressing air; air and other [engines.
 — T., & *Schofield, J.*, 3840, Nov. 4, Actuating furnace [grate-bars.
Holt, T. (*Ibbotson*), 638, Feb. 20, Grate-bars.
Holt, W., 2091, June 7, Driving spindles.
 — W., 3517, Oct. 9, Steaming fabrics and yarns.
Holten, S. E. (*Hansen*), 1706, May 7, Writing or print- [ing instruments.
Holthausen, E., 4481, Dec. 24, Apparatus for lowering [persons, &c.
Holyoake, W. R., 1255, Apr. 7, Printing on metals, &c.
 — W. R., 1941, May 27, Transferring designs, &c.
 — W. R., 2322, June 23, Collapsible tubes for [colours, &c.
Holzmann, P., & *Currle, G.* (*Hughes*), 2825, Aug. 11, [Ice; ice-houses.
Hommel, A. (*Hughes*), 3059, Aug. 31, Photography.
Honnaij, M. L. (*Murdoch*), 1397, Apr. 16, Treating [spent tan.
Honoré, E. (*Gedge*), 1923, May 26, Lubricating oil.
Hood, W. C., 994, Mar. 18, Regulating flow of liquids.
Hooker, G. S., 2950, Aug. 21, Washing-machine.
Hooper, A., 954, Mar. 15, Chimney pots or tops.
Hope, J. (*Lake*), 4524, Dec. 29, Pantograph engraving [machines.
Hope-Vere, C. E., 183, Jan. 18, Cleansing china articles, &c.
Hopkinson, John, 1667, May 5, Purifying grease.
 — Joseph, 3036, Aug. 28, Safety-valves.
 — W. S., & *Holmes, F.*, 3114, Sep. 6, Cutting [and splitting wood, &c.
Horkheimer, O., *Farran, J.*, & *Goldschmid, E. A. J.*, 4417, [Dec. 21, Cutting velvets, &c.
Hornby, H. N., 1782, May 13, Cleaning smoking pipes.
Horne, J., 4132, Nov. 29, Wickless burners for lamps.
Hornsby, H., & *Burnett, M.*, 2611, July 22, Lubricator.
 — R., *Phillips, J. E.*, *Innocent, J.*, & *Rutter, G. T.*, [3482, Oct. 7, Reaping and mowing.
 — W. H., 3013, Aug. 27, Packing for valves.
Hornum, W. H., *Hance, A.*, & *Buckhout, J. D.* (*Bonne- [ville*), 2760, Aug. 5, Fare registers.
Horrex, T., 1260, Apr. 7, Boots and shoes.
Horsman, P. S., & *Goodall, W.*, 2300, June 23, Spinning, &c.
Horton, J., & *Kato, G. P.* (*Lake*), 2602, July 21, Um- [brellas.
Hosking, W. L., 1379, Apr. 15, Sticks and staves.
Hosmer, C., & *Cox, B.* (*Norwood*), 1067, Mar. 24, Needle [and button for upholstery purposes.
 — J. R. (*Shepard*), 3469, Oct. 6, Fire-proof safes, &c.
Hostelart, F. (*Vaughan*), 2391, July 1, Preserving fibrous [tissues.
Hotchkiss, B. B. (*Morgan-Brown*), 4220, Dec. 6, Fire-arms.
Houdaille, G., 4262, Dec. 8, Machinery for raising from [mines.

- Hough, J. E., Rothwell, F. & T., & Shepherd, E., 3268, [Sep. 18, Shuttles.
 — J. E., Rimington, J. McN., Shepherd, E., & [Rothwell, F. & T., 350, Jan. 29, Sewing-machines.
 Hoult, D. & G., 1105, Mar. 25, Railway breaks.
 — G. & D., 1105, Mar. 25, Railway breaks.
 How, A., 4020, Nov. 19, Tobacco-pipes.
 Howard, H., & Sutherland, W. S., 2304, June 24, Weld-
 [ing tubes.
 — James, 3545, Oct. 12, Harvesting machines.
 — James, & Bousfield, E. T., 1024, Mar. 19, Steam-
 [cultivators.
 — James, & Bousfield, E. T., 1603, Apr. 30, [Furnaces.
 — James, & Bousfield, E. T., 2363, June 29, Horse-
 [rakes.
 — John, 1374, Apr. 15, Disinfecting.
 — John, 3830, Nov. 4, Sorting corks.
 — John, & Cox, W., 277, Jan. 25, Saddle-girth
 [tightener.
 — John, & Cox, W., 2618, July 23, Saddle-girth
 [tightener.
 — T., 2653, July 27, Purifying gas.
 Howarth, A. & W., 322, Jan. 28, Dental lathes, &c.
 — J., 240, Jan. 21, Hot-air stoves.
 — R., 3112, Sep. 4, Steering apparatus.
 — W. & A., 322, Jan. 28, Dental lathes, &c.
 Howat, A., 580, Feb. 17, Filling, &c. bottles.
 Howell, T. B., 1979, May 31, Plank levers for pianos.
 Howes, W. H., 3583, Oct. 15, Storage, &c. of petroleum.
 Howie, T. S., 4300, Dec. 11, Apparatus for use with
 [sewing-machines, &c.
 Howitt, T., Walker, S., & Gibson, J., 103, Jan. 12, Stop-
 [pering bottles, &c.
 Howland, R., 524, Feb. 12, Combined almanac, pencil
 [case, &c.
 Howley, M., 804, Mar. 4, Jackets.
 Howson, H., & Peberdy, S. (Johnson), 1418, Apr. 19,
 [Needles.
 Howson, R., & Godfrey, S., 4414, Dec. 20, Gas furnaces.
 Hoyland, W., & Hayward, J., 3941, Nov. 12, Umbrellas
 [and parasols.
 Hoyle, R., & Catlow, U., 2547, July 15, Bottle stoppers;
 [cleansing, &c. same.
 Hoyois, A. (Brookes), 1223, Apr. 5, Steam-engines.
 — A. (Murdoch), 2095, June 7, Pipe joints.
 Huard, L., 2198, June 15, Boot lasts.
 Hubbard, J. P., 3597, Oct. 16, Sewing-machines.
 Hubbersty, H. A., & Reid, H., 3817, Nov. 3, Grinding
 [minerals, &c.
 Huch, E. H., 1336, Apr. 13, Tempering glass.
 — E. H., 2394, July 1, Burner for lamps, &c.
 — E. H., 2483, July 9, Soldiers' equipment.
 Hudleston, B., Crisp, H., & Young, F., 2697, July 30,
 [Ascertaining distances.
 Hudson, R., 2677, July 28, Waggon and "corves."
 Huet, A. F., 4225, Dec. 6, Metallic pyrometer.
 Huet, A. J., & Geyler, A. E. (Johnson), 681, Feb. 24,
 [Treating gases, liquids, &c.
 Hughes, A., 1311, Apr. 10, Reaping and mowing.
 — A., 2326, June 25, Pressing, hoeing, &c. turnips.
 — A., 3225, Sep. 15, Collecting and tying corn, &c.
 — E., 1290, Apr. 9, Fire-arms.
 — E. T. (Parker), 61, Jan. 6, Claw hammers.
 — E. T. (Heshuysen), 924, Mar. 12, Moving rail-
 [way rolling-stock.
 — E. T. (Whitney), 1472, Apr. 22, Fire-arms.
 — E. T. (Bergius), 1595, Apr. 30, Treating slag.
 — E. T. (Bartels & Freise), 1764, May 11, Dyeing.
 — E. T. (Marschalk), 1787, May 13, Lamps for diving.
 — E. T. (Smith & Bates), 2083, June 5, Heating
 [air; ventilating.
 Hughes, E. T. (Smith & Brear), 2262, June 21, Grate
 [bars.
 — E. T. (Deming), 2462, July 8, Feed for power-
 [presses.
 — E. T. (Weiss), 2480, July 9, Washing wool.
 — E. T. (Currie & Holzmunn), 2825, Aug. 11,
 [Ice; ice houses.
 — E. T. (Hommel), 3059, Aug. 31, Photography.
 — E. T. (Lyman), 3897, Nov. 10, Rowing gear.
 — E. T. (Silliman & Wilcox), 4445, Dec. 22, Re-
 [sonant metallic alloys.
 — E. T. (Landers), 4494, Dec. 24, Carving forks.
 — Henry, 372, Feb. 1, Steam-engines.
 — Henry, 2103, June 8, Steam-engines.
 — Henry, 3685, Oct. 23, Lubricators.
 — Henry, & Coltman, H., 4023, Nov. 19, Tram or
 [road locomotives.
 — Hesketh, 2466, July 8, Sewing-machines.
 — R. H., 1870, May 21, Self-acting valves.
 — S., & Turner, J., 392, Feb. 3, Lamp burners.
 — T., Dixon, G., Maddox, J., & Gardner, E., 567,
 [Feb. 16, Fringes.
 — W. C., 2683, July 29, Lime-light gas apparatus.
 Hulton, J. & W., & Crook, T., 881, Mar. 10, Winding
 [yarn, &c.
 — W. & J., & Crook, T., 881, Mar. 10, Winding
 [yarn, &c.
 Humble, W., 149, Jan. 14, Life-boats.
 Hummerston, J., 4134, Nov. 29, Printing.
 Humpage, T., 917, Mar. 12, Coffin-plates.
 Humphreys, G., & Benwell, R. (Alexander), 196, Jan. 19,
 [Bale-bands.
 Humphries, G. G., & Hutchinson, T., 397, Feb. 3, Em-
 [broidering fabrics.
 — J. R., 838, Mar. 6, Preparing joints of soft
 [metal pipes.
 Humy, P. R. de Fauchaux d', 1710, May 8, Combining
 [glass, &c. for various purposes.
 Hunstone, W. H., & Thorpe, J., 1070, Mar. 24, Artificial
 [leather cloth.
 Hunt, B. (Flagler), 290, Jan. 26, Welding tubes, &c.
 — B. (Reynoso), 1558, Apr. 28, Sugar.
 — B. (Wells), 4153, Dec. 1, Printing on glass.
 — B. (Thompson & Nowell), 4235, Dec. 7, Grinding
 [and "rossing" bark.
 — E. (Matthews), 6, Jan. 1, Musical instruments.
 — G. G., & Smyth, W. W., 2334, June 26, Gas en-
 [gines.
 — R., 3926, Nov. 11, Facilitating transit on inclines.
 — S., 982, Mar. 17, Railway couplings and breaks.
 — W. L., 4404, Dec. 18, Theatrical and gymnastic
 [apparatus.
 Hunter, G., 1081, Mar. 24, Steam-boilers.
 — J. C., & Morris, R. W., 2632, July 24, Register-
 [ing rise and fall of liquids.
 — R. H. A., 745, Mar. 1, Invalid bedsteads.
 — T., 4234, Dec. 7, Topping and tailing root crops.
 Hunting, H., 1509, Apr. 10, Puddlers' rabbles & paddles.
 Hurcombe, J. C., 3146, Sept. 7, Umbrellas, parasols, and
 [cases.
 Hurcourt, E. A. R. d' (Clark), 770, Mar. 2, Gas-meters.
 Huret, N. (Henry), 1983, May 31, Propelling carriages,
 [boats, &c.
 Husbands, J. D. (Browne), 2862, Aug. 13, Fire-lighters.
 Hussey, C. A. (Clark), 2043, June 3, Electro-magnetic
 [engines.
 Hutchence, H., & Rider, F. W., 383, Feb. 2, Harmo-
 [niums, organs, &c.
 Hutchinson, E., & Higginbottom, J., 908, Mar. 11, Scour-
 [ing grain.
 — E., & Higginbottom, J., 1193, Apr. 2, Scour-
 [ing grain.

Hutchinson, E., & Higginbottom, J., 1911, May 25, Seour-
[ing grain.
—— T., & Humphries, G. G., 397, Feb. 3, Em-
[broidering fabrics.
—— W., & Shaw, W., 4399, Dec. 18, Steel.
—— W. N., 509, Feb. 11, Stirrups.
Hutchison, A., 1783, May 13, Moulds for casting metals.
—— A. P., & Davey, F. T., 2420, July 5, Kitchen-
[ranges.
—— J., 4076, Nov. 24, Window-blinds.
Huthwaite, T. W., 2426, July 5, Watering-cans.
—— T. W., 2427, July 5, Wheelbarrows.
Hutter, K., & Quillfeldt, C. (Clark), 4438, Dec. 22,
[Stopping bottles, &c.
Hutton, W. S., 2479, July 9, Cut nails.
Huyard, H. (Johnson), 3759, Oct. 29, Furnaces or kilns.
Huxtable, J., 1687, May 6, Ploughs.
Huytens, T. C. M. (Johnson), 445, Feb. 5, Bread.
Hyatt, T., 1451, Apr. 21, Chemical compounds.
—— T., 2015, June 2, Buildings and constructions, &c.
—— T., 2307, June 24, Treating substances for dietary
[and medicinal uses, &c.
—— T., 2359, June 29, Architectural and engineering
[constructions, &c.
—— T., 3201, Sep. 13, Architectural and engineering
[constructions.
—— T., 3357, Sep. 25, Architectural constructions and
[materials.
—— T., 4063, Nov. 23, Buildings, &c.; ships.
—— T. & T. P., 3650, Oct. 21, Nails, screws, hooks, &c.
—— T. P. & T., 3650, Oct. 21, Nails, screws, hooks, &c.
Hyde, T., & Borrett, W. G., 3691, Oct. 25, Lithographic
[printing.

I.

Ibbotson, H. W. (Holt), 638, Feb. 20, Grate-bars.
—— S., 1818, May 15, Wheeled horse or perambu-
[lator.
—— W., 2663, July 27, Paper and paper fabrics.
Ikonnikoff, J. A. (Newton), 3590, Oct. 15, Supplying
[water to steam-boilers.
Iles, G. (Bousfield), 2309, June 24, Adjusting magnetic
[needles.
Illingworth, G. E., 1392, Apr. 16, Lathes.
—— H., 1365, Apr. 15, Spinning, &c. yarns.
Imbs, J. (De Pass), 3953, Nov. 13, Twisting, &c. threads
[for cleaning.
Imlay, C. G. (Lake), 253, Jan. 22, Preventing fraud by
[tram-car conductors, &c.
Imray, J., 3818, Nov. 3, Friction-clutches.
—— J. (Tournier), 212, Jan. 20, Masticating, &c. food.
—— J. (Heberlein), 676, Feb. 24, Railway breaks.
—— J. (Hahn), 2684, July 29, Rolling mills.
—— J. (Hahn), 2903, Aug. 18, Rolling mills.
—— J. (Scherbascheff), 2271, June 22, Soda.
—— J. (Boyd), 2737, Aug. 3, Cutting screw taps, &c.
—— J. (Durfee), 3317, Sep. 22, Boiler furnaces.
—— J. (Armengaud), 4366, Dec. 16, Preserving meat.
—— J., & Boulton, M. P. W., 2320, June 25, Helical
[pumps.
Ingersoll, S. (Blake), 4207, Dec. 6, Boring rock, &c.
Ingham, W. P., & Hill, A. C., 3253, Sep. 17, Clay retorts.
Inglefield, E. A., & Lenox, G. C. L., 3908, Nov. 10, Anchors.
Inglis, J., & Inglis, W., 3965, Nov. 15, Storing grain,
[&c. afloat.
Inglis, W., & Inglis, J., 3965, Nov. 15, Storing grain,
[&c. afloat.
Ingram, J., 1161, Mar. 31, Raising and forcing liquids.

Ingram, J. G., 235, Jan. 21, Washers and packing pieces.
—— W. J., 1853, Apr. 14, Printing.
Ingrey, C., 3592, Oct. 15, Brake for perambulators, &c.
Innocent, J., Rutter, G. T., Hornsby, R., & Phillips, J. E.,
[3482, Oct. 7, Reaping & mowing.
Inns, W., 1005, Mar. 18, Puddling furnaces.
Ireland, A. (Johnson), 1757, May 11, Cans for lubricants.
Irvine, A. K., 1852, Apr. 14, Compressing, &c. tobacco,
[ropes, &c.
Isherwood, S., & Weare, R., 326, Jan. 28, Carbonaceous
[material for filtering, &c.
Isherwood, T. (Clark), 1006, Mar. 18, West stop-motion.
Isitt, F., & Farrer, D., 3974, Nov. 16, Roller skates.
Ittmann, L. F. E. (Coffin), 1130, Mar. 29, Steering
[gear, &c.

J.

Jaap, J., 1431, Apr. 20, Advertising.
Jachimovicz, C., & Friedlander, J., 266, Jan. 23, Collect-
[ing crops.
Jack, R. G., 3824, Nov. 3, Bicycles.
—— W., & Findlay, J., 930, Mar. 12, Distilling coal, &c.
Jackson, E., 1072, Mar. 24, Cartridges.
—— H., 4219, Dec. 6, Drying bricks, tiles, &c.
—— H., & Milburn, R., 518, Feb. 12, Treating salts,
[ores, &c.
—— H., & Milburn, R., 933, Mar. 12, Crushing ores,
[&c.; concrete and cement.
—— H., & Milburn, R., 1917, May 26, Treating salt.
—— H., & Milburn, R., 4320, Dec. 13, Decomposing
[vapours.
—— J. & T., 3928, Nov. 11, Injectors, ejectors, &c.
—— J. S., & Berry, W. S., 3544, Oct. 12, Woven fabrics.
—— R., & Winders, W., 3489, Oct. 8, Preparing fibres.
—— S., Kay, R. P., Dearnley, N., & Stafford, T.,
[4410, Dec. 20, Weaving.
—— T. & J., 3928, Nov. 11, Injectors, ejectors, &c.
—— W., 2380, June 30, Boots and shoes.
—— W., 3841, Nov. 4, Desiccating coal or fuel.
—— W., 4292, Dec. 10, Lockets, brooches, &c.
Jacob, D., 711, Feb. 26, Distributing manures, &c.
—— L., & Brown, J., 1647, May 4, Solitaires, studs, &c.
Jacobi du Vallon, G. C. J. de, & West, H. J., 2239, June 18,
[Skating rinks.
Jacot-Burmman, H. (Mills), 3118, Sep. 6, Watches.
Jaquet, F. A., 1380, Apr. 15, Burning petroleum, &c.
Jagger, H. & J., 1142, Mar. 30, Singeing yarn.
—— J. & H., 1142, Mar. 30, Singeing yarn.
Jakeman, C. J. W., & Merryweather, J. C. & H., 1513,
[Apr. 24, Locomotives and carriages.
James, B. (Lake), 2089, June 7, Leather-pulp, &c.
James, C. H., & Hamilton, A. J. (Keller), 1322, Apr. 12,
[Felted articles.
—— G. F., & Ewen, F. W., 1719, May 8, Insulating
[telegraph wires.
—— J., 284, Jan. 25, Railway carriages and wagons.
—— S., 3173, Sep. 10, Fuel.
—— S. H., 2294, June 23, Constructing tunnels.
Jameson, J., & Schaeffer, A. G. (Tegnander), 1790, May 13,
[Centrifugal pumps.
Jamieson, A. (Laid), 3600, Oct. 16, Key switch for
[telegraphs.
Jamieson, N., & Miller, T., 1488, Apr. 23, Curtains.
Janiet, J. B. (Casalogna), 591, Feb. 18, Printing presses.
Jarboe, J. W., & Gandolfo, J. (Clark), 3030, Aug. 28,
[Treating bone black; moulding sugar.
Jardine, W., & Chadwick, H., 2951, Aug. 23, Treating
[cupreous solutions.

- Jarvey, G. M., 2703, July 30, Match-boxes, &c.
 Jarvie, N., & Miller, W., 4295, Dec. 11, Making oakum.
 Jeantaud, C. (Johnson), 651, Feb. 22, Wheels.
 Jefferson, C., L., M. & J., 2587, July 20, Washing wool &c.
 — J., C., L. & M., 2587, July 20, Washing wool &c.
 — L., M., J. & C., 2587, July 20, Washing wool &c.
 — M., J., C. & L., 2587, July 20, Washing wool &c.
 Jeffery, G. E., 2414, July 3, Hay-making.
 Jeffreys, E. A., 866, Mar. 9, Railway wheels.
 — E. A., & Woodcock, H. B., 1174, Apr. 1, Rail-
 [way wheels].
 Jeffries, G., 4351, Dec. 15, Fire-arms.
 Jelstrup, E. J. A. (Gray), 2502, July 12, Glove-sewing
 [machines].
 Jenkinson, M., 98, Jan. 11, Fastenings for boots, &c.
 Jenks, S. A., & Shedd, J. H. (Lake), 3070, Sep. 1
 [Liquid-meters; pumps; motor-engines].
 Jenks, T., 3862, Nov. 5, Composition for use in the
 [arts, &c.].
 Jennings, G. B. (Qvist), 4092, Nov. 25, Oil fuel.
 — J. G., & Pocock, A. W., 1599, Apr. 30, Liquid-
 [meters].
 — J. G., & Pocock, A. W., 4192, Dec. 3, Water-
 [waste preventers].
 — W., & Copley, J., 3141, Sep. 7, Dyeing, &c.
 [tissues and fibres; obtaining products from same].
 Jensen, P. (Hamburg-American Sewing-Machine Co.)
 [26, Jan. 2, Printing metals].
 — P. (Klinkerfues), 167, Jan. 15, Hygrometers.
 — P. (Bohlken), 295, Jan. 26, Washing machine.
 — P. (Bohlken), 307, Jan. 27, Earth-boring augers.
 — P. (Baumotte), 494, Feb. 10, Painters' easels.
 — P. (Bürgin), 506, Feb. 11, Increasing adhesion of
 [locomotive wheels].
 — P. (Schmitt), 870, Mar. 9, Knitting machines.
 — P. (Sartorius), 882, Mar. 10, Scales and weights.
 — P. (Dührkop), 904, Mar. 11, Bakers' ovens.
 — P. (Koun), 970, Mar. 16, Electric-light.
 — P. (Meusel), 1338, Apr. 13, Glass.
 — P. (Schönlau), 1370, Apr. 15, Bricks.
 — P. (Wegener), 1421, Apr. 19, Nuts for tapping.
 — P. (Schönlau), 1468, Apr. 22, Tube wells.
 — P. (Bockhacker), 1962, May 28, Weighing wool
 [after washing].
 — P. (Schlickeysen), 2124, June 9, Preparing clay,
 [pent, &c.; tile presses].
 — P. (Kallmeyer & Schmidt), 2457, July 8, Sewing-
 [machines].
 — P. (Gustafson), 2475, July 9, Screw nuts, &c.
 — P. (Vidal), 3315, Sep. 22, Navigating the air.
 — P. (König), 3563, Oct. 14, Covers, &c. for ciga-
 [rette papers].
 — P. (Achtelstetter & Von Sawiczewsky), 3729,
 [Oct. 27, Preserving meat].
 — P. (Ostberg), 3958, Nov. 13, Apparel for protec-
 [tion against fire, &c.].
 — P. (Halsey & Deaderick), 3994, Nov. 17, Steam-
 [boiler flues].
 — P. (Lang), 4490, Dec. 24, Fluid-meters.
 — P. (Putz), 4538, Dec. 30, Fire-places.
 Jephcott, W., 3662, Oct. 21, Cases for watches, &c.
 Jerome, E., & Wheeler, S., 1080, Mar. 24, Paper boxes, &c.
 Jewell, J., & Fogaty, T., 2141, June 11, Stowing, lower-
 [ing, &c. ships' boats].
 Jewitt, H. (Craighead), 1548, Apr. 27, Reflectors.
 — H. (Rose), 2277, June 22, Numerical toy.
 — H. (Rose), 2418, July 3, Toys.
 — H. (Rose), 3440, Oct. 4, Gas-burners.
 — H. (Rose), 4405, Dec. 18, Slate desk.
 Jewsbury, R., 821, Mar. 5, Holding or releasing cords, &c.
 Jeyes, J., 3388, Sep. 28, Casters.
 — J., & Turner, C. H., 205, Jan. 19, Lubricator.
 Job, A. M., 3610, Oct. 18, Raising ships; making vessels
 [air-tight, &c.].
 Jobert, C. A., 2400, July 2, ships; propelling same.
 Joel, H. F., & Canning, Sir S., 2518, July 13, Pneumatic
 [signalling; testing tubes].
 Johns, T. H., 3468, Oct. 6, Coating metallic sheets.
 Johnson & Hastings (Johnson), 1249, Apr. 6, Measur-
 [ing rules].
 Johnson, C., 1777, May 13, Photographers' head rests, &c.
 — Edmond, 3940, Nov. 12, Ear pendants.
 — Edwin, 1722, May 8, Ordnance and fire-arms.
 — Edwin E., & S. E., 4255, Dec. 8, Deodorising,
 [&c. mineral Oils].
 Johnson, G. (Clark), 199, Jan. 19, Rolling nut blanks.
 Johnson, J., Lowe, S., & Renton, W., 2379, June 30,
 [Cutting flocks or rags, &c.].
 — J. C., 209, Jan. 20, Forming tube skelps.
 — J. H. (Van Haagen), 47, Jan. 5, Sharpening
 [drills].
 — J. H. (Lowerre & Tucker), 85, Jan. 9, Goffer-
 [ing, &c.].
 — J. H. (Bañolas), 138, Jan. 13, Extinguishing
 [fires].
 — J. H. (Constant), 301, Jan. 26, Connecting tubes.
 — J. H. (Adamson), 381, Feb. 2, Starch; fermen-
 [ted liquors].
 — J. H. (Marot), 408, Feb. 3, Saccharine solutions.
 — J. H. (Lamarre), 409, Feb. 3, Signalling and
 [illuminating].
 — J. H. (Huytens), 445, Feb. 5, Bread.
 — J. H. (Oexle), 561, Feb. 16, Grinding corn, &c.
 — J. H. (Jeantaud), 651, Feb. 22, Wheels.
 — J. H. (Huet & Geyler), 681, Feb. 24, Treating
 [gases, liquids, &c.].
 — J. H. (Société Financière de Paris), 704, Feb. 25,
 [Treating alunite].
 — J. H. (Tastz), 742, Mar. 1, Medical capsules.
 — J. H. (Nye), 765, Mar. 2, Snap-hooks.
 — J. H. (Nye), 766, Mar. 2, Snap-hooks.
 — J. H. (Nye), 767, Mar. 2, Snap-hooks.
 — J. H. (Geneste, Herscher & Herscher), 826,
 [Mar. 5, Traps for separating liquids, &c.].
 — J. H. (Roullier), 874, Mar. 9, Mats.
 — J. H. (Van Haagen), 912, Mar. 11, Grinding
 [and sharpening].
 — J. H. (Mignon & Rouart), 973, Mar. 16, Sugar;
 [paper-pulp].
 — J. H. (Gray), 974, Mar. 16, Transmitting
 [musical vibrations, &c.].
 — J. H. (Bañolas & Carlier), 1002, Mar. 18, Rail-
 [ways and tramways].
 — J. H. (Bañolas & Carlier), 1023, Mar. 19, Rail-
 [ways and tramways].
 — J. H. (Hastings & Johnson), 1249, Apr. 6, Mea-
 [suring rules].
 — J. H. (Peberdy & Howson), 1418, Apr. 19,
 [Needles].
 — J. H. (Wertheim), 1462, Apr. 21, Steam-boilers.
 — J. H. (Lissagaray), 1484, Apr. 22, Manure.
 — J. H. (La Société Anonyme de Publications
 [Periodiques], 1663, May 4, Printing.
 — J. H. (Ireland), 1757, May 11, Cans for lubricants.
 — J. H. (Rikli), 1793, May 14, Rail and tramway
 [vehicles; signalling in same].
 — J. H. (Hilf), 1856, May 20, Permanent way.
 — J. H. (Lämmerhirt), 1867, May 21, Rotary-
 [engines, &c.].
 — J. H. (Moehring), 1882, May 22, Lamps.
 — J. H. (Berdan), 1910, May 25, Measuring dis-
 [tances].
 — J. H. (Alden & Alexander), 1927, May 25, Steam-
 [engines].

- Johnson, J. H. (*Société Financière de Paris*), 1946, May 27, [Treating alunite.
 — J. H. (*Lenoir*), 1988, May 31, Looking glasses.
 — J. H. (*Taylor*), 2022, June 2, Tinned plates.
 — J. H. (*Cohen*), 2134, June 10, Treating iron compounds.
 — J. H. (*Boudin*), 2183, June 14, Wrenches or spanners.
 — J. H. (*Caterson*), 2218, June 16, Vessels for poisons, &c.
 — J. H. (*Cone*), 2219, June 16, Life-rafts, &c.
 — J. H. (*Kokosinski, Landowski, & Landowski*) [2267, June 21, Beverages.
 — J. H. (*Juron & Juron*), 2488, July 10, Paper pulp.
 — J. H. (*Van der Elst*), 2584, July 20, Steam-engines.
 — J. H. (*Disston*), 2605, July 21, Blowers for compressing, &c. fluids.
 — J. H. (*Whipple*), 2623, July 23, Wadding, felted fabrics, &c.
 — J. H. (*Mignon & Rouart*), 2647, July 26, [Treating sugar cane.
 — J. H. (*Vogt*), 2690, July 29, Sulphuric acid.
 — J. H. (*Van der Elst*), 2718, July 31, Dredging machines.
 — J. H. (*De Mersanne*), 2787, Aug. 7, Electric signals, fires, and lights.
 — J. H. (*Gondolo*), 2921, Aug. 19, Electric-clocks.
 — J. H. (*Lissagaray*), 2960, Aug. 23, Manure.
 — J. H. (*Heyl*), 2972, Aug. 24, Composition for ships' bottoms, &c.
 — J. H. (*Sulzer, Sulzer & Ernst*), 3170, Sep. 9, [Motive-power engines.
 — J. H. (*Pile*), 3224, Sep. 15, Casks, &c.
 — J. H. (*Klein*), 3255, Sep. 17, Looms.
 — J. H. (*Goodyear*), 3280, Sep. 18, Sewing boots.
 — J. H. (*Barba*), 3415, Oct. 1, Screw-bolts, &c.
 — J. H. (*Camacho*), 3416, Oct. 1, Electro-magnetic engines.
 — J. H. (*Le Tellier & Verstraet*), 3483, Oct. 7, [Printing fabrics.
 — J. H. (*Normand*), 3516, Oct. 9, Condensing steam, &c.
 — J. H. (*Castanier*), 3612, Oct. 18, Tunnels.
 — J. H. (*Blake*), 3678, Oct. 22, Grinding and polishing.
 — J. H. (*Huyard*), 3759, Oct. 29, Furnaces or kilns.
 — J. H. (*Wolcott*), 3789, Nov. 1, Motive-power engines.
 — J. H. (*Schiaffino*), 3873, Nov. 8, Propelling, &c. ships.
 — J. H. (*Philippe*), 4157, Dec. 1, Wheelbarrows.
 — J. H. (*Pastre*), 4379, Dec. 17, Steam-engine indicators.
 — J. H. (*Sellers & Sellers*), 4415, Dec. 20, Rotating puddling vessels.
 Johnson, J. R., & Harding, G. P. (Morgan-Brown), 1335, [Apr. 13, Treating sewage.
 — J. R., & Harding, G. P. (Morgan-Brown), 2119, [June 9, Type-writing machines.
 — J. R., & Harding, G. P. (Morgan-Brown), [2250, June 19, Tramway rolling-stock.
 — M., & Richardson, M. C. (Lake), 3126, Sep. 6, [Hoes.
 Johnson, R., 400, Feb. 3, Motive-power.
 Johnson, R. B. (Wells), 1754, May 11, Bolts, spikes, &c.
 Johnson, S., & Allan, W., 191, Jan. 18, Heating feed-water; condensing steam.
 — S., Smith, J., & Allan, W., 3429, Oct. 2, [Marine buffers.
 Johnson, S. E. & E. E., 4255, Dec. 8, Deodorising, &c. [mineral oils.
 — S. H., 156, Jan. 14, Cocks or valves.
 — S. H., 810, Mar. 4, Glucose.
 — W., & Bartlett, R. S., 4048, Nov. 22, Sewing-machine needles, &c.
 — W. C., & Phillips, S. E., 3798, Nov. 2, Telegraph cables.
 Johnston, D., 4194, Dec. 3, Dry-closets.
 — R., 3664, Oct. 21, Weighing and registering [coal, &c.
 — S., 3245, Sep. 16, Harvesting machines.
 — S., 3793, Nov. 1, Harvesting machines.
 Joliot, J. P. S., 204, Jan. 19, Railway breaks.
 Jolissaint-Vonèche, A. G., & la Société Comte & Mabut [(Tongue, 3290, Sep. 20, Vegetable leather.
 Jolley, W., 172, Jan. 16, Railway signalling.
 — W. R., 2461, July 8, Securing, &c. life rafts.
 Jolly, F., 2211, June 16, Furnaces.
 Joly, C. (Wilkinson), 4484, Dec. 24, Ink.
 Jones, A., 2785, Aug. 7, Baskets and bags.
 — Edward, 1697, May 7, Train and railway carriages, &c.
 — Edward J., 2943, Aug. 21, Ageing or steaming [fabrics, &c.
 — Edward W. T., 3336, Sep. 24, Galvanizing iron.
 — Edwin, & Bayliss, M., 174, Jan. 16, Nuts & washers.
 — Ephraim A. & J. A., 956, Mar. 15, Puddling furnaces.
 — Ephraim A. & J. A., 3603, Oct. 16, Rotary [puddling furnaces.
 — F. C., 1953, May 28, Supplying water to urinals, &c.
 — F. W., 4294, Dec. 10, Exhibiting when closets, &c. [are engaged.
 — G., 2770, Aug. 5, Treating redonda phosphate.
 — G. H., 3774, Oct. 30, Adapting artificial teeth.
 — Harry L., 492, Feb. 10, Disinfectants & deodorizers.
 — Henry, 4175, Dec. 2, Wooden burial cases or [caskets.
 — Hugh, & Davies, J., 248, Jan. 22, Stoppering bottles.
 — J., 1987, May 31, Folding chair or seat.
 — J. A. & E. A., 956, Mar. 15, Puddling furnaces.
 — J. A. & E. A., 3603, Oct. 16, Rotary puddling [furnaces.
 — J. M., 3679, Oct. 23, Treating hides, &c.
 — J. W., 595, Feb. 18, Clips or fastenings for boots, &c.
 Jones, M. E. (Clark), 3526, Oct. 11, Lighting and extinguishing gas.
 Jones, P., 2822, Aug. 11, Bearings for mills, &c.
 — R. A., & Perry, J. J., 12, Jan. 1, Lighting cigars, &c.
 — T., 482, Feb. 9, Preserving and rendering wood [uninflammable.
 — T. C. (Clements), 2548, July 15, Sail hank.
 — T. O., 688, Feb. 25, Ferrules.
 — William, & Walsh, J., 1864, May 21, Soda & potash.
 — William P., 510, Feb. 11, Fire-arms.
 — Wright, 2834, Aug. 11, Looms.
 Jordan, J., 1942, May 27, Circulating water in boilers.
 — J., 1943, May 27, Tube stoppers for boilers.
 — J., 1944, May 27, Cutting stone, &c.
 Joseph, J., 4000, Nov. 18, Light holder for reading.
 Jouret, A. J. (Clark), 4461, Dec. 22, Portable fountains.
 Joyce, R. J. S. (Weintraud), 3866, Nov. 6, Fastenings [for purses, &c.
 — R. J. S., & Weintraud, F., 2450, July 7, Buttons.
 Jucker, R., 132, Jan. 13, Cleaning knives and forks.
 Judkins, C., 3258, Sep. 17, Regulating supply to gas-burners.
 Juron, C. & J. (Johnson), 2488, July 10, Paper pulp.
 — J. & C. (Johnson), 2488, July 10, Paper pulp.
 Just, M. Z., & Downton, J., 4475, Dec. 23, Water-closets.
 Justice, P. S. (Shaw), 793, Mar. 3, Valves.
 — P. S. (Shaw), 1828, May 18, Deadening noise in [engines; spark arresters.

K.

- Kaberry, L., 4071, Nov. 23, Drawing frames for prepar-
[ing cotton, &c.]
Kain, J. F., 972, Mar. 16, Umbrellas, sticks, whips, &c.
Kallmeyer, G., & Schmidt, E. (Jensen), 2457, July 8,
[Sewing-machines.]
Kaselowsky, E. (Pieper), 535, Feb. 13, Steam-boilers.
Kast, F. (Maas), 1904, May 25, Pipes for smoking.
Kato, G. P., & Horton, J. (Lake), 2602, July 21, Um-
[brellas.]
Kaulbach, E., 542, Feb. 15, Rotatory-engine.
Kay, J., & Knowles, S., 3323, Sep. 23, Drying, steaming,
[&c. fabrics; drying fibres, &c.]
Kay, J. A. (Wise), 1461, Apr. 21, Knot-tying apparatus.
Kay, J. W., 4238, Dec. 7, Threaders for sewing-ma-
[chines, &c.]
— R. P., Dearnley, N., Stafford, T., & Jackson, S.,
[4410, Dec. 20, Weaving.]
— T. B., 2336, June 26, Carding-engines.
Kaye, J., 1295, Apr. 9, Registering the locking or un-
[locking of locks.]
— J., 2058, June 4, Detecting fastening of doors.
— J., Slingsby, W. C., & Leigh, W., 1387, Apr. 16,
[Oil-cans.]
Kearton, S., 1232, Apr. 5, Draught spring for vehicles.
Keats, A. & J., & Greenwood, A., 1378, Apr. 15, Sewing-
[machines.]
— J., 989, Mar. 17, Buttons.
— J., & Greenwood, A., 1703, May 7, Hook for
[sewing-machines.]
— J. & A., & Greenwood, A., 1378, Apr. 15, Sewing-
[machines.]
— J., Greenwood, A., & Wainwright, S., 3123, Sep. 6,
[Sewing thread and cords.]
Kebble, T. H., 1840, May 19, Smoking pipes.
Keel, G., 3962, Nov. 13, Roller skates.
— G., 4509, Dec. 28, Facilitating locomotion on foot.
— G., & Cheshire, J., 2549, July 15, Skates.
Keene, G. A., & Sawyer, F. A. (Haseltine), 700, Feb. 25,
[Surfaces for steps, &c.]
Keirby, J. E., 737, Mar. 1, Packing for pistons, &c.
Keith, James, 4506, Dec. 27, Combined boiler & furnace.
— Jeremiah, 4556, Dec. 31, Sewing-machines.
— T., 4093, Nov. 25, Crates for bottles.
Kelen, L. V., 721, Feb. 26, Gas-stove.
Keller, A. (James & Hamilton), 1322, Apr. 12, Felted
[articles.]
Kellett, H., Macfeggan, W. S., & Armstrong, R., 4059,
[Nov. 22, Pumps.]
Kelley, G., 2780, Aug. 5, Locks.
Kellogg, H., 3139, Sep. 7, Leatherizing paper, &c.
— H., 3289, Sep. 20, Springs for corsets, &c.
Kellogg, H. (Crosby), 324, Jan. 28, Fur coated fabrics.
— H. (Crosby), 325, Jan. 28, Head coverings.
Kelly, J., 4452, Dec. 22, Railway points or switches.
— P., 1366, Apr. 15, Combing fibres.
— S. J. J., 521, Feb. 12, Producing letters, &c. upon
[glass.]
Kemp, S., & Allen, D., 3424, Oct. 2, Roller skates.
Kempe, A. & W., 4454, Dec. 22, Raising the nap upon
[cloths, &c.]
— W., 3306, Sep. 21, Raising the nap upon cloths.
— W. & A., 4454, Dec. 22, Raising the nap upon
[cloths, &c.]
Kendall, W. J., & Robinson, G. A., 588, Feb. 18, Castors.
— W. J., & Robinson, G. A., 1628, May 3, Breaks.
— W. J., & Robinson, G. A., 1728, May 10, Per-
[ambulators.]
Kendrick, T., 31, Jan. 4, Coffin furniture.
Kennard, H. J., 846, Mar. 8, Stoves and flue pipes.
Kennedy, James, & Wigg, C., 314, Jan. 27, Furnaces.
Kennedy, James, & Barclay, G. (Pellow), 3295, Sep. 21,
[Horse-rakes.]
Kennedy, John J., 1176, Apr. 1, Safety apparatus for
[painters; sun-blind; fire-escape, &c.]
— John J., 3347, Sep. 24, Safety apparatus for
[painters; sun-blind; fire-escape, &c.]
— W., & Acheson, G., 40, Jan. 4, Spinning.
— W., 3540, Oct. 12, Sounding depth of water.
Kent, G., 4222, Dec. 6, Cutting or slicing fruit, &c.
— W. H., 4439, Dec. 22, Cleaning boots and shoes.
Kenworthy, W. E., 3655, Oct. 21, Washing fabrics, &c.
Kenyon, F., 3914, Nov. 11, Police and other head-dresses.
— H., 2112, June 9, Ammonia and chloride of
[ammonium.]
— J. & J. H., 738, Mar. 1, Carding fibres.
— J. H. & J., 738, Mar. 1, Carding fibres.
— J. W., 1538, Apr. 27, Low-water alarm.
— S., 3016, Aug. 27, Composition for iron wire.
Ker, M., 1964, May 28, Supporting shelves.
Kerby, J., 274, Jan. 23, Boots.
Kerr, E. S., 3558, Oct. 13, Device for lifting, &c. ladies'
[dresses.]
— J. P., 1523, Apr. 26, Winding sewing thread.
Kessler, C. W. (Conradi), 1252, Apr. 7, Treating peat, &c.
— C. W. (Conradi), 1301, Apr. 10, Coke from peat.
— C. W. (Conradi), 2643, July 26, Railway couplings.
Kessler, J. L., & Faure, M. J. F. R. (Sauvée), 2897,
[Aug. 17, Sulphuric acid.]
Kesterton, H., 2765, Aug. 5, Metal tubes.
Kettle, L. A. (Shaw), 1166, Mar. 31, Paper boxes.
Key, J., 1836, May 19, Bedsteads and cots.
— W., 2067, June 5, Station gas governors.
Keywood, W., 1824, May 17, Elastic looped fabrics.
Kidd, J., 531, Feb. 13, Gas.
— J., 3299, Sep. 21, Vapor gas generators & burners.
— J., 4257, Dec. 8, Furnaces and heating apparatus.
— J., & Arnold, L., 66, Jan. 7, Gas.
— J., & Hearson, C. E., 4265, Dec. 9, Gas-burners.
Kidder, J., 1614, May 1, Ball castors, &c.
Kilburn, J. E. & R., & Greenwood, E., 895, Mar. 10,
[Railway couplings.]
— J. E. & R., Greenwood, E., & Rigby, F., 4169,
[Dec. 2, Railway couplings.]
— R. & J. E., & Greenwood, E., 895, Mar. 10,
[Railway couplings.]
— R. & J. E., Greenwood, E., & Rigby, F., 4169,
[Dec. 2, Railway couplings.]
Kilner W. J., 2996, Aug. 26, Producing currents of
[electricity.]
Kimball, D. F. (Brown), 3992, Nov. 18, Electro-magnetic
[engines, &c.]
— R. J. & Taylor, De W. C. (Clark), 3625, Oct. 19
[Water-meters.]
Kinder, E. C. & J. T., 3252, Sep. 17, Sign or lamp.
— J. T. & E. C., 3252, Sep. 17, Sign or lamp.
King, H. J. H., 1903, May 25, Supporting ratchet drill-
[ing braces, &c.]
— James A., 3536, Oct. 12, Excavating earth.
— James A., & Little, J., 3154, Sep. 8, Glass-furnaces.
— John, 925, Mar. 12, Railway wheels.
— John T., 2915, Aug. 18, Fruit gathering implement.
— John T., 4406, Dec. 20, Lock-washers for bolts, &c.
— John T. (Westinghouse), 569, Feb. 17, Motive-
[power engines.]
— John T. (Brandon), 1001, Mar. 18, Printing machines.
— John T. (Chisholm), 3297, Sep. 21, Engine valves.
— John T. (Lauder), 3975, Nov. 16, Registering om-
[nibus passengers.]
— M. H. H., 1134, Mar. 29, Communicating in trains, &c.

King, M. H. H., 4056, Nov. 22, Disengaging apparatus; [ships' davits; loading, &c. merchandise.
 — N., 2953, Aug. 23, Fire-arms.
 — T., 2492, July 10, Steam-pumps.
 — W. (Lawther), 4043, Nov. 20, Treating oleaginous [seeds.
 Kingsford, C., 1456, Apr. 21, Artificial fuels.
 Kinneraley, H., 2747, Aug. 4, Night signalling.
 Kinsey, H., 1442, Apr. 20, Moulding fuel, peat, clay, &c.
 Kirby, W., 503, Feb. 11, Coffins.
 Kirk, G., & Spivey, W., 2569, July 19, Loom temples.
 — P., 885, Mar. 10, Puddling and heating furnaces.
 Kirkby, S. A., 4286, Dec. 10, Fire-places.
 Kirkman, J., 1913, May 25, Railway carriage draw-bars.
 Kitchen, J., 1061, Mar. 23, Washing and churning.
 Kitson, A., & Naylor, J., 2601, July 21, Closing, &c. [doors of railway carriages.
 — James, 855, Mar. 8, Detecting removal or opening [of cases, &c.
 — John, 1449, Apr. 21, Sweeping streets.
 Kitson, R. (Haseltine), 2433, July 5, Opening cotton.
 — R., & Stott, S. E. (Lake), 4429, Dec. 21, Cotton [openers.
 Klein, E. (Johnson), 3255, Sep. 17, Looms.
 Kleinau, H. (Teysonniere), 3946, Nov. 12, Adhesive seals.
 Kleinen, L., 1866, May 21, Controlling, &c. power of lo- [comotive engines.
 — L., 2878, Aug. 16, Cleaning and preparing flax.
 Klinkerfues, W. (Jensen), 167, Jan. 15, Hygrometers.
 Klinkmann, A., & Heydemann, R., 2659, July 27, Potato [diggers.
 Knap, C., Taunton, R. H., & Hayward, G., 208, Jan. 19, [Wrought iron tubes.
 Knapp, H. F., 2861, Aug. 13, Pneumatic car brakes.
 Knaust, W. (Wirth), 439, Feb. 5, Valves.
 — W. (Wirth), 678, Feb. 24, Stop-valves.
 — W. (Wirth), 1359, Apr. 14, Steam fire-engines.
 — W. (Wirth), 1641, May 3, Steam fire-engine [locomotives.
 Knell, W., 3825, Nov. 3, Screws and screw-drivers.
 — W., 4518, Dec. 29, Screw-drivers.
 Knelles, C. H. (Lake), 486, Feb. 9, Imitation leather, [damask, &c.
 Knight, S. E., 2465, July 8, Chimney pot.
 Knip, J. F. (Bishop), 403, Feb. 3, Exhibiting pictures.
 Knoblauch, L. (Zimmermann & Knoblauch), 1540, Apr. 27, [Signalling in trains; breaks.
 — L. (Zimmermann & Knoblauch), 1541, Apr. 27, [Railway signals.
 Knoblauch, R., & Zimmermann, E. (Knoblauch), 1540, [Apr. 27, Signalling in trains; breaks.
 — R., & Zimmermann, E. (Knoblauch), 1541, [Apr. 27, Railway signals.
 Knott, K., 3595, Oct. 16, Slaughtering, preparing, and [packing meat.
 — S., & Harrison, J. E., 3572, Oct. 14, Cop-tubes.
 — S., Taylor, H., & Shiers, B. & J. J., 2831, June 26, [Cop-tubes, &c.
 — W., & Rudd, T., 916, Mar. 12, Ventilating mines.
 Knowelden, W., 1066, Mar. 24, Removing hair from skins.
 Knowles, J., 3910, Nov. 10, Steam-engines.
 — S., & Kay, J., 3328, Sep. 23, Drying, steaming, [&c., fabrics; drying fibres, &c.
 — T., 3474, Oct. 6, Combing fibres.
 Koch, J. E. C., 1059, Mar. 23, False neckties.
 Koenig, H. C. M. R. (Jensen), 3563, Oct. 14, Covers, &c. [for cigarette papers.
 Kohrig, R., & Pzillas, R. (Bousfield), 2486, July 10, Sugar.
 Kokosinski, E., & Landowski, E. & P. (Johnson), 2267, [June 21, Beverages.
 Koning, D. A. W., 1413, Apr. 17, Pontoon dock.
 Kosloff, S. A., 441, Feb. 5, Electric-light.

Kosloff, S. A. (Brewer), 2767, Aug. 5, Electric-light.
 Kosminski, M., 522, Feb. 12, Articles of dress for ladies.
 — M., 1727, May 10, Articles of dress.
 Kottgen, A. (Gauhe), 619, Feb. 20, Coloring matter for [dyeing, &c.
 Koun, S. V. (Jensen), 970, Mar. 16, Electric-light.
 Kraft, F. W., & Schneider, R. (Lake), 3196, Sep. 11, [Measuring angles.
 Kreeft, C. (Newton), 1843, May 19, Railway crossings.
 Kreittmayr, J. (Wirth), 959, Mar. 15, Plastic compounds.
 Kritch, W. C., 464, Feb. 6, Cutting paper.
 — W. C., & Greenwood, A., 1602, Apr. 30, Printing.
 Krupp, A. (Longsdon), 2796, Aug. 9, Shields for ar- [moured vessels, &c.
 — A. (Longsdon), 3132, Sep. 7, Working, &c. guns; [carriages for same.
 — A. (Longsdon), 3133, Sep. 7, Furnaces.
 — A. (Longsdon), 3134, Sep. 7, Brakes of gun-car- [riages.
 — A. (Longsdon), 3149, Sep. 8, Wheels.
 Kuenemann, J. B. (Magner & Kuenemann), 194, Jan. 19, [Treating and dyeing vegetable textiles.
 Kuhlmann, C. F., 1265, Apr. 7, Furnaces.
 Kuhlmann, H. (Wirth), 679, Feb. 24, Pegging boots.
 Kuenemann, E., & Magner, P. (Kuenemann), 194, Jan. 19, [Treating and dyeing vegetable textiles.
 Kunkler, E., 1971, May 29, Making malt from raw grain.
 Kunstader, J. J., 4559, Dec. 31, Roller skates.
 Kusenber, A., 1084, Mar. 24, Waste-water conduit.

L.

LaBastie, F. B. A. Royer de, 2157, June 12, Tempering glass.
 Labbé, F., Drevelle, A., & Petitjean, P. (Browne), 2386, [June 30, Casters.
 Labbé, M. T., 1259, Apr. 7, Cement for dentistry.
 Lachmund, A., 2778, Aug. 6, Cooking apparatus.
 Lackersteen, J. F., 2693, July 30, Making firewood into [bundles.
 — J. F., 3666, Oct. 21, Telegraph cables.
 La Caux des Roseaux, M. A. J. de, 3202, Sep. 13, Lubri- [cators.
 Lacy, H., 2143, June 11, Extinguishing fires.
 Ladd, J. H. (Whipple), 621, Feb. 20, Halds for looms.
 — J. H., (Fox), 2407, July 8, Tamping rails.
 — W. (Jamieson), 3600, Oct. 16, Key switch for [telegraphs.
 Ladelle, W. W., & Thompson, J. B., 3535, Oct. 12, Making [lime, &c.
 La Fors, H., 4883, Dec. 17, Road locomotives and traction- [engines.
 Lagillardaie, E. de, 3506, Oct. 9, Breeding oysters.
 Laidler, J., 1947, May 27, Taking and reading shorthand [reports, &c.
 — W. H., 2824, Aug. 11, Measuring gauge.
 Lainé, J. B. (Alexander), 921, Mar. 12, Fire-arms.
 Lake, W. R. (Silcox), 5, Jan. 1, Kindling fires.
 — W. R. (Fitz-Patrick), 42, Jan. 4, Drawers.
 — W. R. (Russell), 48, Jan. 5, Horse-shoes.
 — W. R. (Bray), 100, Jan. 12, Rivets; setting same.
 — W. R. (Whitmore), 163, Jan. 15, Spikes.
 — W. R. (Bustin), 185, Jan. 18, Hanging wall papers.
 — W. R. (McClintock), 207, Jan. 19, Preserving [substances.
 — W. R. (Imley), 253, Jan. 22, Preventing fraud by [tram-car conductors, &c.
 — W. R. (Farris), 310, Jan. 27, Water circulating bars.
 — W. R. (Brownlow & Francis), 340, Jan. 29, Coat- [ing for metals.

- Lake, W. R. (*Bogle*), 395, Feb. 3, Brushing boots; polish-
[ing, &c. cutlery.]
— W. R. (*Osborne*), 471, Feb. 8, Harvesters.
— W. R. (*Larkin*), 472, Feb. 8, Furnace grates.
— W. R. (*Knelles*), 486, Feb. 9, Imitation leather,
[damask, &c.]
— W. R. (*Lazar*), 536, Feb. 13, Railways.
— W. R. (*Boivin*), 615, Feb. 19, Cutting leather, &c.
— W. R. (*Thomas*), 671, Feb. 23, Bustles and pads.
— W. R. (*Shepard & Seaman*), 761, Mar. 2, Regu-
[lating flow of gas, &c.]
— W. R. (*Champney*), 842, Mar. 6, Metal dies.
— W. R. (*Denéef & Wilkin*), 843, Mar. 6, Beds or
[couches.]
— W. R. (*Martin*), 949, Mar. 13, Dressing flour.
— W. R. (*Steinmetz*), 975, Mar. 16, Umbrellas.
— W. R. (*Rue*), 976, Mar. 16, Injectors for steam
[generators.]
— W. R. (*Bouilliant*), 1033, Mar. 20, Scaffold poles.
— W. R. (*Sulzbach*), 1049, Mar. 22, Preventing steam-
[boiler explosions.]
— W. R. (*Pearson*), 1050, Mar. 22, Sewing hosiery.
— W. R. (*Holdorff & Brückner*), 1313, Apr. 10, Hot-
[air engines.]
— W. R. (*Dubuisson*), 1533, Apr. 27, Treating jute,
[&c. for paper.]
— W. R. (*Wooton, Blake, & Fulton*), 1613, May 1,
[Writing desks or tables.]
— W. R. (*Pagan, Ricart, & Montejo*), 1709, May 7,
[Expanding tubes.]
— W. R. (*Dodge*), 1725, May 8, Pent-fuel.
— W. R. (*Balmforth*), 1822, May 15, Button-hole
[casings.]
— W. R. (*Sloan*), 1849, May 19, Wood-screws.
— W. R. (*Thompson*), 1896, May 24, Sewing-machines.
— W. R. (*Monchovaut*), 1899, May 24, Feeding bottles.
— W. R. (*Crandall*), 2009, June 1, Toy-menageries.
— W. R. (*Rogers*), 2045, June 3, Smelting ores;
[making iron; furnaces.]
— W. R. (*Turner*), 2046, June 3, Treating, &c.
[noxious gases.]
— W. R. (*McClintock*), 2080, June 5, Compositions
[for paving, &c.]
— W. R. (*James*), 2089, June 7, Leather-pulp, &c.
— W. R. (*Brooks*), 2168, June 12, Electro-typeshells.
— W. R. (*Hlubek*), 2181, June 14, Engines.
— W. R. (*Allen*), 2182, June 14, Rivetting machines.
— W. R. (*Wilson*), 2234, June 17, Steam-boiler valves.
— W. R. (*Bannister & Milligan*), 2245, June 18,
[Advertising.]
— W. R. (*Thomson*), 2349, June 28, Rowlocks for boats.
— W. R. (*Michaels*), 2439, July 6, Toys.
— W. R. (*Marsland*), 2508, July 12, Liquid-meter.
— W. R. (*Wippen*), 2509, July 12, Galvanic appa-
[ratus.]
— W. R. (*Chamberlin*), 2516, July 13, Chain-cables.
— W. R. (*Remington & Sons*), 2579, July 20, Pistol.
— W. R. (*Horton & Kato*), 2602, July 21, Umbrellas.
— W. R. (*Lane*), 2615, July 22, Motors for light
[machinery.]
— W. R. (*Talcott*), 2661, July 27, Measuring cloth, &c.
— W. R. (*Ross*), 2664, July 28, Tickets.
— W. R. (*Ross*), 2671, July 28, Tickets.
— W. R. (*Williams*), 2751, Aug. 4, Anchors.
— W. R. (*Harrison*), 2774, Aug. 5, Harvesters.
— W. R. (*Chambers*), 2799, Aug. 9, Folding, &c. paper.
— W. R. (*Trudeau*), 2819, Aug. 11, Gas-burners.
— W. R. (*Blake*), 2847, Aug. 12, Cleaning uphol-
[stery, fabrics, wool, &c.]
— W. R. (*Thomas*), 2899, Aug. 17, Bustles and pads.
— W. R. (*Pittsburgh Chain & Car Link Co.*), 2973,
[Aug. 24, Welding chain links.]
Lake, W. R. (*Potter*), 2985, Aug. 25, Watches, &c.
— W. R. (*Westcott, Spencer, Hail, & Bicknall*), 3000,
[Aug. 26, Knitting.]
— W. R. (*Adee*), 3001, Aug. 26, Traps for basins, &c.
— W. R. (*Shedd & Jenks*), 3070, Sep. 1, Liquid-
[meters; pumps; motor engines.]
— W. R. (*Johnson & Richardson*), 3126, Sep. 6, Hoes.
— W. R. (*Schan*), 3142, Sep. 7, Grates for furnaces, &c.
— W. R. (*Foster*), 3143, Sep. 7, Steam, hot-air or
[water engine, &c.]
— W. R. (*Schneider & Kraft*), 3196, Sep. 11, Measur-
[ing angles.]
— W. R. (*Cushman & Stoops*), 3208, Sep. 13, Sew-
[ing-machines.]
— W. R. (*Courteille*), 3217, Sep. 14, Blasting-powder.
— W. R. (*Billings*), 3244, Sep. 16, Compressing and
[reducing steel ingots, &c.]
— W. R. (*Leverich*), 3275, Sep. 18, Wheels for vehicles.
— W. R. (*Bartlett*), 3294, Sep. 20, Ozone.
— W. R. (*Seymour*), 3318, Sep. 22, Bale-bands.
— W. R. (*Fuller & Crandall*), 3364, Sep. 25, Mag-
[neto-electric-machines.]
— W. R. (*Mershon*), 3387, Sep. 28, Heating apparatus.
— W. R. (*Meharshi*), 3498, Oct. 8, Motive-power.
— W. R. (*Wenmaekers*), 3501, Oct. 8, Motor for
[omnibuses, &c.]
— W. R. (*Cassinelli*), 3504, Oct. 9, Warming car-
[riages, &c.]
— W. R. (*Simonds*), 3529, Oct. 11, Tempering saws, &c.
— W. R. (*Dejeu*), 3530, Oct. 11, Dutch oven.
— W. R. (*Brown*), 3611, Oct. 18, Raising coal, &c.
— W. R. (*McPherson*), 3622, Oct. 19, Fuel.
— W. R. (*Du Bois*), 3646, Oct. 20, Lead traps.
— W. R. (*Branch*), 3677, Oct. 22, Diamond holders,
[and fitting diamonds in same.]
— W. R. (*Newton*), 3784, Oct. 30, Dredging.
— W. R. (*Holden*), 3785, Oct. 30, Alloys for protect-
[ing surfaces from oxidation, &c.]
— W. R. (*Appleton*), 3848, Nov. 4, Knitting.
— W. R. (*Brown*), 3861, Nov. 5, Fog-horns.
— W. R. (*Manson*), 3869, Nov. 6, Motor for light
[machines.]
— W. R. (*Squier*), 3929, Nov. 11, Hulling, &c. grain
[or seed.]
— W. R. (*Griffith & Byrne*), 4013, Nov. 18, Printing-
[presses.]
— W. R. (*Du Bois*), 4026, Nov. 19, Plumbers' traps.
— W. R. (*Beatley*), 4117, Nov. 26, Gas.
— W. R. (*Van Tenac*), 4206, Dec. 4, Pocket fire
[and light producer.]
— W. R. (*Wolf & Wolf*), 4227, Dec. 6, Steam-engine
[valves.]
— W. R. (*Kitson & Stott*), 4429, Dec. 21, Cotton
[openers.]
— W. R. (*Hathaway, Snow, Gregory, & Maglone*),
[4456, Dec. 22, Journal-box bearings.]
— W. R. (*Fell*), 4462, Dec. 22, Vegetable parchment.
— W. R. (*Haddock*), 4513, Dec. 28, Spikes.
— W. R. (*Oakley & Quarrill*), 4514, Dec. 28, Press
[for copying, &c.]
— W. R. (*Hope*), 4524, Dec. 29, Pantograph engrav-
[ing machines.]
— W. R. (*Mann*), 4561, Dec. 31, Making cigars.
Lakin, J. P., 3490, Oct. 8, Dry slide for gas fittings.
Laloy, J. F. A., 2068, June 5, Clipping skins, fabrics, &c.
Lamarre, E. A. A. (*Johnson*), 409, Feb. 3, Signalling
[and illuminating.]
Lamb, E. B., 4413, Dec. 20, Roller skates.
— J. W., & Hallam, S., 2607, July 22, Allowing
[steam to escape from boilers, &c.]
— J. W., & Lowe, S., 4260, Dec. 8, Knitting machinery.
Lambert, C., 360, Jan. 30, Rain-water filters.

- Lambert, C. L.** (Clark), 1825, May 17, Photographic [printing frames].
- Lämmerhirt, A.** (Johnson), 1867, May 21, Rotary en- [gines, &c.]
- Lammers, C. L. H.**, 2874, Aug. 14, Indicating time.
- Lamoitié, E. J.** (Mewburn), 4150, Dec. 1, Cues for bil- [liards, &c.]
- La Mothe, B. J.**, 4213, Dec. 6, Metallic frames for rail- [way cars, &c.]
- Lampitt, C., & Thompson**, 2933, Aug. 20, Dressing [flour, &c.]
- Lamprell, E.**, 1873, May 21, Ornamenting skirts, &c.
- Lancaster, W.**, 250, Jan. 22, Sizing and dressing ma- [chines, &c.]
- Land, E.**, 706, Feb. 26, Propelling boats.
- Landau, M. I.**, 1674, May 5, Lamps; heating, &c.; ven- [tilators and wind-guards.]
- Lander, H.**, 3851, Nov. 5, Agricultural implements [("Collectors.")]
- Landers, C. S.** (Hughes), 4494, Dec. 24, Carving forks.
- Landon, J. H., & Danvers, F. C.**, 897, Mar. 11, Consoli- [dated coal.]
- Landowski, E. & P., & Kokosinski, E.** (Johnson), 2267, [June 21, Beverages.]
- **P. & E., & Kokosinski, E.** (Johnson), 2267, [June 21, Beverages.]
- Lane, D.**, 1875, May 22, Printing machines.
- Lane, J. G.** (Lake), 2615, July 22, Motors for light [machinery.]
- Lang, G.** (Jensen), 4490, Dec. 24, Fluid-meters.
- **J., & Desjardins, E.** (Mewburn), 2018, June 2, [Treating spinning waste.]
- Lang, W.**, 3435, Oct. 2, White lead.
- Lansdale, R.**, 1803, May 14, Size; preventing mildew in [cotton, &c.]
- Lanyon, J.**, 2715, July 31, Ventilating.
- La Perrelle, G. de (Guérin)**, 2437, July 6, Preserving [food.]
- Larard, F.**, 3031, Aug. 28, Show-cases, picture-frames, &c.
- **F.**, 4221, Dec. 6, Hinges.
- Larkin, H.**, 1125, Mar. 27, Iron and steel.
- Larkin, J. B.** (Lake), 472, Feb. 8, Furnace grates.
- Larkman, J., & Diprose, J.**, 2788, Aug. 7, Coffins.
- Larmoyeux, V., & Paternotte, G.** (Gedge), 2227, June 17, [Railways and tramways.]
- Larocque, A. & L.** (Clark), 927, Mar. 12, Utilising tin- [plate scraps.]
- **L. & A.** (Clark), 927, Mar. 12, Utilising tin- [plate scraps.]
- Lascelles, W. H.**, 2151, June 11, Buildings.
- Laslett, T. N.**, 523, Feb. 12, Measuring heights and [distances of objects.]
- Lasnier, E.**, 1835, May 18, Furniture casters.
- Lathrop Antifriction Co.** (Clark), 3148, Sep. 7, Anti- [friction bearings.]
- Latour, H.**, 1814, May 15, Picking, carding, &c. fibres [and tags.]
- Laubuhr, T. Moerman-** (Clark), 1888, May 22, Ammonia- [cal salts.]
- Lauder, G.** (King), 3975, Nov. 16, Registering omnibus [passengers.]
- Laumay, A., Mazé, & Pellicier, J.** (Perrier), 4502, [Dec. 24, Kelp.]
- Laurent, A., & Picard, B.** (Henderson), 3869, Sep. 27, [Aërial vessel.]
- Laurie, T.**, 3487, Oct. 8, Combined seat, desk, and table.
- Laveissiere, J. J.**, 2297, June 23, Preparing metal strips [for wire drawing.]
- Lavender, R.**, 1291, Apr. 9, Treating tallow, &c.
- **R.**, 3797, Nov. 2, Blast lamps.
- Law, J.**, 3356, Sep. 25, Signalling in trains.
- **J.**, 3683, Oct. 23, Signalling in trains.
- Law, J., & Priest, E. & A.**, 940, Mar. 13, Carding-engines.
- **J., & Smeeton, G. F.**, 4447, Dec. 22, Signalling in [trains.]
- **J. H., Redfern, T., & Smith, P.**, 481, Feb. 5, Paper.
- Lawrance, E.**, 796, Mar. 4, Curing corns.
- Lawrence, E.**, 4398, Dec. 18, Cutting, drilling, and en- [graving metals, &c.]
- **E.**, 4435, Dec. 22, Controlling brake power.
- **E.**, 4436, Dec. 22, Fixing railway, &c. bolts.
- **J., Follows, F. W., & Bate, J.**, 3288, Sep. 20, [Cutting grass edges; knife-cleaning machines.]
- **J. E., & Porter, E. V.**, 791, Mar. 3, Centri- [fugal pumps.]
- **J. E., & Porter, E. V.**, 1515, Apr. 24, Engines [and pumps.]
- Laws, G. A.**, 3478, Oct. 7, Covering holes in vessels.
- Lawson, G.**, 780, Mar. 3, Excavating.
- **G.**, 802, Mar. 4, Railway rails.
- Lawther, A. B.** (King), 4043, Nov. 20, Treating olea- [ginous seeds.]
- Laycock, G.**, 805, Mar. 4, Controlling speed of horses.
- **P.**, 572, Feb. 17, Stiffening & staining fabrics.
- **P.**, 779, Mar. 3, Cutting flocks.
- **W. S.**, 478, Feb. 9, Electric-breaks.
- Lazar, A.** (Lake), 536, Feb. 13, Railways.
- Laxon, A., & Fremion, L.**, 3263, Sep. 18, Fire-escapes.
- Lea, J.**, 1182, Mar. 29, Game registers.
- Leach, R., & Webb, J.**, 257, Jan. 22, Embroidering.
- Leachman, W. B., & Nussey, G. H.**, 139, Jan. 14, [Punching and rivetting machines, &c.]
- Leadbetter, H.**, 1685, May 6, Non-conducting composi- [tions.]
- Leather, T. P., Richards, J., Williams, D. & Matthews, T. W.**, [935, Mar. 13, Tin-plate.]
- Leatherland, J.**, 2293, June 23, Dressing corn, &c.
- Leber, J.**, 4485, Dec. 24, Binding hat and bonnet shapes.
- Le Bert, J. F.** (Clark), 3882, Nov. 8, Fire-arms.
- **J. F., & Delsarte, H. A.** (Clark), 2876, Aug. 14, [Fire-arms.]
- Le Bret, B.** (Gedge), 2472, July 9, Signalling on trains.
- Le Bricquair, J. F. A.** (Espir), 291, Jan. 26, Mining [powder.]
- Ledger, J.** (Drevelle), 4431, Dec. 22, Separating stamps.
- Leduc, N. J. M.** (Dann), 2303, June 24, Sugar-cutting [machines.]
- Lee, H.**, 2529, July 14, Swivel looms.
- **James**, 181, Jan. 13, Fire-arms.
- **James, D., & Crabtree, J.**, 3964, Nov. 13, Looms.
- **Joseph**, 991, Mar. 18, Ships' scrapers, hoes, &c.
- **Joseph William**, 481, Feb. 9, Rotary-pumps.
- **Joseph Wilson**, 2966, Aug. 24, Pickers for looms.
- **R.**, 2209, June 16, Embossing & glazing leather, &c.
- **R.**, 2342, June 28, Softening, graining, &c. leather.
- **R.**, 3846, Nov. 4, Embossing, &c. leather.
- Leeman, J.**, 3852, Nov. 5, Releasing ships' boats.
- **J.**, 4145, Nov. 30, Releasing ships' boats.
- Lees, T., & Pidgeon, J.**, 260, Jan. 23, Hats.
- Lefebvre, H. G., & T., & Desurmont, P. L.** (Spence), 3164, [Sep. 9, Varnish, oils, &c.]
- **T., & H. G., & Desurmont, P. L.** (Spence), 3164, [Sep. 9, Varnish, oils, &c.]
- Legat, D. M.** (Clark), 463, Feb. 6, Sewing straw hats, &c.
- Leger, F. V.**, 273 1, Aug. 3, White pigments.
- Legge, A. H., & Richardson, J. S.**, 1968, May 29, Steam- [engines.]
- Legrand, A.** (Bonneville), 2759, Aug. 5, Railroads.
- **A. L. J.** (Henderson), 3052, Aug. 31, Com- [bined blotting-pad, paper-weight, &c.]
- Leicester, T., & Blezard, R.**, 3518, Oct. 11, Bolting, &c. [flour and middlings.]
- Leigh, E. & E. A.**, 1271, Apr. 8, Carding-engines.
- **E. A. & E.**, 1271, Apr. 8, Carding-engines.

- Leigh, W., Kaye, J., & Slingsby, W. C., 1387, Apr. 16, [Oil-cans.]
- Leighton, A. (Smith), 3399, Sep. 30, Wardrobes, &c.
- Leiter, J. (Wirth), 296, Jan. 26, Electric apparatus.
- Le Maistre, F., 2419, July 3, Attaching scarves, &c.
- Le Marquand, A. (Clark), 815, Mar. 4, Metallic alloy.
- Le Moyne, J. H., 750, Mar. 1, Mule and shuttle spindle.
- Lempriere, G. P., 4204, Dec. 4, Fastenings for gloves, &c.
- Leug, J. S. (Stiff), 3843, Nov. 4, Stop-valves.
- Lenoir, J. J. E. (Johnson), 1988, May 31, Looking glasses.
- Lenox, G. C. L., & Inglefield, E. A., 3908, Nov. 10, Anchors.
- Lensing, Von Gimborn, & Van Gülpen (Brewer), 2817, [Aug. 11, Caloric motor.]
- Leonard, W. A., 3539, Oct. 12, Ignition fuses; friction [match composition, &c.]
- Leonardt, D., 2004, June 1, Cigars.
- Leopolder, J. (Elborough), 797, Mar. 4, Liquid-meters.
- Leplay, H., Box, J., Aubertin, E., & Boblique, L., 181, [Jan. 16, Phosphates and phosphorus.]
- H., Box, J., Aubertin, E., & Boblique, L., 214, [Jan. 20, Disinfecting sewage, &c.]
- Leprince, Roy & Co. (Bousfield), 4272, Dec. 9, Pistons.
- Leproust, L., & Clair, J. M. M., 1861, May 21, Stuffing [stools; packing.]
- Lesobre, C. (Bonneville), 1937, May 27, Ovens.
- Lessware, J. N., 1083, Mar. 24, Glucose sugar; brewing.
- J. N., 3338, Sep. 24, Glucose or grape sugar.
- Lester, F. & M. W., & Smith, H. M. (Cameron), 4127, [Nov. 27, Furnaces.]
- Lester, H. E., & Hallett, G., 36, Jan. 4, Lowering boats.
- H. E., & Hallett, G., 3130, Sep. 7, Steering appa- [ratus.]
- Lester, M. W., & F., & Smith, H. M. (Cameron), 4127, [Nov. 27, Furnaces.]
- Le Sueur, C., 3116, Sep. 6, Safety or floating vest.
- Le Tellier, A., 4061, Nov. 22, Purifying &c. water; treat- [ing sewage.]
- Le Tellier, A. A. F., & Verstraet, L. D. (Johnson), [3483, Oct. 7, Printing fabrics.]
- Leturmy, L. (Foucard), 4301, Dec. 11, Railway breaks.
- Leuchtenrath, E. (Thompson), 4098, Nov. 26, Preserving [food, &c.]
- Level, J., 1656, May 4, Teaching, &c. metrical system.
- Lévesque, A. J. J. (Dufrené), 195, Jan. 19, Railway [sleepers.]
- Leverich, G. (Lakp), 3275, Sep. 18, Wheels for vehicles.
- Levet, C. (Wise), 3, Jan. 1, Boring rock, &c.
- Levey, C., & Myles, W., 670, Feb. 23, Nuts and washers.
- Levy, L., 2583, July 20, Playing cards.
- Lewin, M. B., 2735, Aug. 3, Screw ships and vessels.
- Lewinsohn, L. L., 3417, Oct. 1, Mounting flowers, feathers, [&c.]
- Lewis, D., & Smith, E., 2963, Aug. 24, Dobby for looms.
- G. H., 137, Jan. 13, Cigars.
- R., & McIlwaine, J. H., 3524, Oct. 11, Steam-boilers.
- R., & Griffiths, L., 3573, Oct. 14, Cleaning tin-plates.
- R. T., 237, Jan. 21, Looking glasses and mirrors.
- S. S., & Copié, A., 988, Mar. 17, Soap.
- S. S., & Copié, A., 3248, Sep. 17, Soap.
- Lejbold, F. (Pryor), 4307, Dec. 11, Preserved meat.
- Leyland, J., 4041, Nov. 20, Grinding spindles.
- J., Partington, G., & Davies, E., 2586, July 20, [Bolts, set-screws, and screw-bolts.]
- Liancourt, C. A. Count de G. de, 390, Feb. 3, Preserving [life at sea.]
- Libotte, N. (Mills), 3011, Aug. 27, Safety apparatus for [mine-cages, &c.]
- Liddell, J., 3782, Oct. 30, Polishing stone.
- Liddiard, W., 934, Mar. 13, Earth-closets.
- Lidgerwood, W. V. V., 1103, Mar. 25, Pulping coffee.
- Lidgerwood, W. V. V. (Haseltine), 1086, Mar. 25, Steam- [engines.]
- Liepmann, H., & Heinzerling, C., 2495, July 12, Caout- [chouc and gutta percha.]
- Life Saving Suit Co., American (Clark), 2283, June 22, [Saving life at sea.]
- Light, C. L., 3062, Aug. 31, Railway wheels and fastening [tires.]
- Lillie, J., 606, Feb. 19, Kitchen-ranges, &c.
- J., 1333, Apr. 13, Regulating, &c. flow of liquids.
- J., 3355, Sep. 25, Castors.
- Limouzin, F., 2820, Aug. 11, Boats and vessels.
- Lind, J., 457, Feb. 6, Securing ends of bale-bands.
- Lindley, L., 683, Feb. 24, Making fabric on lace machinery.
- L., 2505, July 12, Working lace machines.
- Lindsay, R., 1238, Apr. 6, Quadrats.
- Ling, G., & Ransome, J. E., 3261, Sep. 17, Lawn-mowers.
- Lingard, J., 2835, Aug. 11, Stoppers for, and filling bottles.
- Lipman, H., 781, Mar. 3, Protecting tea-chests.
- Lipscombe, F., 4055, Nov. 22, Architectural ornamentation.
- F., 4501, Dec. 24, Admitting air to furnaces.
- Lissagaray, H. O. P. (Johnson), 1484, Apr. 22, Manure.
- H. P. O. (Johnson), 2960, Aug. 23, Manure.
- Little, C. J., 918, Mar. 12, Steam-engine expansion valves.
- J., & King, J. A., 3154, Sep. 8, Glass furnaces.
- Littlehales, A., 2310, June 24, Fastenings for solitaires, [cravats, &c.]
- Littlewood, J., & Stead, J. F., 2636, July 24, Looms.
- Livermore, B. M. (Chapman), 3403, Sep. 30, Preventing [overheating of bearings.]
- Livesay, A. F., 2832, Aug. 11, Smoke and air flues.
- Livesey, E., & Berry, T., 2273, June 22, Mowing and [reaping.]
- G. T., 1955, May 28, Purifying gas.
- J., 599, Feb. 18, Railways and tramways.
- J., 2739, Aug. 3, Ventilating buildings.
- J., & Edwards, J., 2563, July 17, Locking points.
- J., & Adams, W., 4390, Dec. 18, Rolling stock [of railways, &c.]
- Livingstone, G., 837, Mar. 6, Slop carts.
- Lloyd, C. M., 672, Feb. 24, Window-frames; hanging sashes.
- C. M., 2235, June 18, Saving life from drowning.
- C. M., 3801, Nov. 2, Saving life at sea.
- J., & Scully, J., 226, Jan. 20, Drying wall- [papers, &c.]
- M. G., 3859, Nov. 5, Trimming lawns, &c.
- S. Z., & Rogers, B. W., 2519, July 13, Screws.
- Loader, C., 3009, Aug. 27, Making, gathering, and load- [ing hay, &c.]
- Lochhead, W., 2306, June 24, Hats.
- Lock, E., & Chapman, G. E., 3998, Nov. 17, Securing [and holding leaves of paper, &c.]
- Lockey, J. T., 1159, Mar. 31, Furnaces.
- J. T., 2882, Aug. 16, Evaporating brine, &c.; [furnaces.]
- Lockwood, W., 1879, May 22, Safety-valves.
- W., 3776, Oct. 30, Steam-boilers.
- Loder, R., 3531, Oct. 12, Making, &c. articles in paper.
- Lodge, J., 4280, Dec. 9, Textile fabrics.
- Lodge, W. B. (Clark), 2520, July 13, Fulling mills.
- Loeb, B. (Brewer), 2626, July 23, Mixing gas-producing [agents for "extinctors."]
- B. (Brewer), 3701, Oct. 25, Enabling persons to [enter smoke filled places, and lanterns for same.]
- Loebl, S., 614, Feb. 19, Heating and cooking apparatus.
- Loeser, I., 4385, Dec. 17, Destroying insects.
- Loewenberg, H., 420, Feb. 4, Imitation braids, leather, &c.
- H., 1837, May 19, Imitating leather, wood, &c.
- H., 3050, Aug. 31, Coating fabrics for imi- [tation leather, &c.]
- Lœwenstein, D., & Ward, S., 78, Jan. 8, Doubling, &c. [threads; stop-motion.]
- Loewenthal, E., 2053, June 4, Fancy buttons.
- Lofts, E., 2153, June 12, Checking monies.

Lohnstein, O. E. (*Collings*), 3716, Oct. 26, Folding doors, [casements, &c.]
 Lomax, G. H., 1642, May 3, Lamps.
 — H., & Bradbury, G. F., 2592, July 21, Sewing-machines.
 — H., & Bradbury, G. F., 3432, Oct. 2, Sewing-machines.
 — H., & Bradbury, G. F., 3653, Oct. 21, Sewing-machines.
 — J., & Atherton, W., 699, Feb. 25, Looms.
 Lombardon, P., 1327, Apr. 12, Candles.
 Lomel, C. E., 1014, Mar. 19, Fire-arms.
 Lomnitz, E. J., & Duxbury, J., 1267, Apr. 8, Ornamenting "dhooties."
 Longagne, M. L. Buret de, 1316, Apr. 10, Steam-boilers [and furnaces].
 — M. L. Buret de, 2107, June 8, Steam-cars and [engines].
 Longbottom, C., 2288, June 23, Brooms and brushes.
 Longden, D., 1452, Apr. 21, Sheep-shears.
 Longridge, J. A., 2167, June 12, Ordnance.
 Longridge, J. A. (Longridge), 4284, Dec. 10, Ordnance.
 Longridge, M. (Longridge), 4284, Dec. 10, Ordnance.
 Longsdon, A. (*Krupp*), 2796, Aug. 9, Shields for armoured [vessels, &c.].
 — A. (*Krupp*), 3132, Sep. 7, Working, &c. guns; [carriages for same].
 — A. (*Krupp*), 3133, Sep. 7, Furnaces.
 — A. (*Krupp*), 3134, Sep. 7, Breaks of gun-carriages.
 — A. (*Krupp*), 3149, Sep. 8, Wheels.
 — D., & Toppin, P., 176, Jan. 16, Horse-shoes.
 — D., Murray, J. W., & Collins, R., 1444, Apr. 21, [Ships].
 Lontin, D. F. (Clark), 473, Feb. 8, Application of electro-dynamic machines.
 Looker, B., 3174, Sep. 10, Heating apparatus.
 Loomis, K. H., 2744, Aug. 4, Preserving fruit, eggs, &c.
 Lopez, J. A. (Dayral), 2935, Aug. 20, Utilizing woollen [waste].
 Lothrop, T. C., & Dunbar, H. P., 4372, Dec. 17, Vulcanized rubber articles.
 Lotz, W. F., 1838, May 19, Holding, &c. lamp wicks.
 — W. F., 4533, Dec. 30, Lamps.
 Louttit, K. Mc L. P., 1815, May 15, Lamps; heating.
 Lovell, T., 3950, Nov. 13, Indicating, &c. imperfections [in permanent way and rolling stock of rail-ways and tramways].
 Low, D. G. (Ramsay), 1956, May 28, Sail hank or shackle.
 Low, R., 993, Mar. 18, Turning lathes.
 Lowder, W. H., 1119, Mar. 27, Flues.
 Lowe, J. S., 3351, Sep. 24, Voting apparatus.
 Lowe, R. E. (Poole), 29, Jan. 4, Cutting blind slats.
 Lowe, S., & Lamb, J. W., 4260, Dec. 8, Knitting machinery.
 — S., Renton, W., & Johnson, J., 2379, June 30, [Cutting flocks or rags, &c.].
 Lowerre, A. H., & Tucker, T. M. (Johnson), 85, Jan. 9, [Goffering, &c.].
 Lowry, G., 4540, Dec. 30, Drilling & shaping machines.
 Lublinski, R., 3588, Oct. 15, Umbrella tip fasteners.
 Lucas, F. R., 2633, July 24, Submarine cables.
 — J., 3035, Aug. 28, Lamps.
 Luck, J. R. W., 2226, June 17, Waterproof garments.
 Luckenbach, F. A., 243, Jan. 21, Casting & annealing slag.
 Lucop, C., 1429, Apr. 20, Grinding seed, grain, ore, &c.
 Ludeke, J. E. F., 1771, May 12, Motive-power.
 Ludlow, R., 2750, Aug. 4, Grocers' canisters, &c.
 Ludolph, L., 1753, May 11, Washers.
 — L., 1776, May 13, Removing incrustation.
 Lumby, E. C., 2968, Aug. 24, Boilers for heating water.
 Lumley, H. R., 1919, May 26, Breaking ice.

Lumley, H. R., 3623, Oct. 19, Propelling vessels, &c.
 Lund, T., Gregg, J., & Marks, W. H., 1372, Apr. 15, Tubes.
 Lupton, A., 148, Jan. 14, Self-lubricating wheels; axles, &c.
 — H. E., J. C. & W., 824, Mar. 5, Loom temples.
 — J. C., W. & H. E., 824, Mar. 5, Loom temples.
 — W., H. E. & J. C., 824, Mar. 5, Loom temples.
 Lutwyche, S. G. (*Cogent*), 4416, Dec. 21, Saddles.
 Lyall, J., 1164, Mar. 31, Tube expanders.
 Lyle, J. (*Lyle*), 2010, June 2, Rolling leaf-tea.
 — J. G., & Norton, C. D., 3343, Sep. 24, Telegraphic [communication].
 Lyle, W. S. (*Lyle*), 2010, June 2, Rolling leaf-tea.
 Lyman, D. T. (Haseltine), 1781, May 13, Threadspools; [pail-handles, &c.].
 — W. (Hughes), 3897, Nov. 10, Rowing gear.
 Lynam, J., 1192, Apr. 2, Combining metals for cutters, &c.
 — J., 8043, Aug. 30, Hard metallic compounds.
 Lyon, W., 2598, July 21, Bordering paper, &c. with black.
 — W. P., 3382, Sep. 28, Applying magnetism.
 Lyte, F. Maxwell (Clark), 563, Feb. 16, Ammonia.
 Lytle, W. A., 105, Jan. 12, Iron, steel, &c.
 — W. A., 455, Feb. 6, Making alkali, &c.
 — W. A., 627, Feb. 20, Alkali.
 — W. A., 656, Feb. 23, Toilet soap.
 — W. A., 2406, July 3, Animal charcoal, &c.
 — W. A., 3579, Oct. 15, Deoxidizing and calcining [ores, &c., coking, &c. solid matter, and producing carbonic oxide flame].

M.

Maas, L. (*Kast*), 1904, May 25, Pipes for smoking.
 Mabane, T., & English, E., 2809, Aug. 10, Boots & shoes.
 Mabson, J., & Harrison, W., 1575, Apr. 29, Sewing-machines.
 Mabut & Comte, la Société & Jolissaint-Vonèche, A. G. [Tongue], 3290, Sep. 20, Vegetable leather.
 Macartney, G., 3833, Nov. 4, Couplings for fire-hose, &c.
 McCabe, W., & Crosby, A. (Benson), 4032, Nov. 20, [Cleaning steam-boiler flues].
 McCarthy, J., 1146, Mar. 30, Collecting & removing mud.
 McClintock, J. R. (Lake), 207, Jan. 19, Preserving substances.
 — J. R. (Lake), 2080, June 5, Compositions for [paving, &c.].
 — W. A. (Clark), 3230, Sep. 15, Seed-drills.
 MacColl, H., 3814, Nov. 3, Rivetting, punching, &c.
 Macdonald, J., 2193, June 15, Windows.
 Macdonald, J. C., & Calverley, J., 611, Feb. 19, Printing.
 Macdonald, W., 4084, Nov. 24, Protecting watches from loss.
 — W. S., 2343, June 28, Drawing off water for [condensing engines].
 Macdonell, A., 1454, Apr. 21, Washing bottles, &c.
 — A., 2551, July 16, Filling & corking bottles.
 McDougall, I. S., 3256, Sep. 17, Furnaces or fire-places.
 Mace, C., & Dickinson, J., 931, Mar. 12, Steam-boilers.
 — C., & Dickinson, J., 932, Mar. 12, Steam-boilers.
 — C., & Carr, T. R., 2589, July 20, Steam-boiler [furnaces].
 — C., & Brewster, J., 3871, Nov. 6, Tube stoppers.
 McEvoy, C. A., 270, Jan. 23, Extinguishing fire.
 — C. A., 2786, Aug. 7, Firing and giving motion [to torpedoes, &c.].
 — C. A., 4057, Nov. 22, Petroleum stoves.
 McFarlane, H. B., 2158, June 12, Steam-boilers.
 Macfarlane, T. D., 1274, Apr. 8, Washing, churning, &c.
 Macfeggan, W. S., Armstrong, R., & Kellett, H., 4059, [Nov. 22, Pumps].
 McGee, W., 2188, June 15, Winding thread.
 — W., 4313, Dec. 13, Winding sewing thread.

- McGeoch, W., 4007, Nov. 18, Automatic latches, &c.
 McGeorge, J., 4181, Dec. 2, Embroidering machines.
 McGillivray, J. G., 2246, June 18, Boring and cutting.
 McGowan, G., & Heinzerling, C., 1712, May 8, Anthracene.
 McGrah, T., 822, Mar. 5, Sewing-machines and stands.
 ——— T., 3380, Sep. 28, Sewing-machines.
 McGregor, D., 3991, Nov. 17, Verifying compass indications.
 Machattie, A. T., 1792, May 14, Ships to save life at sea.
 MacIlwaine, J. H., & Lewis, R., 3524, Oct. 11, Steam-boilers.
 Macintosh, J., 4031, Nov. 20, Treating tissues, &c. of animals.
 ——— J. M., 3933, Nov. 12, Tobacco pouches, &c.
 McKain, M., & Charles, W. (Abel), 1240, Apr. 6, Nuts.
 Mackay, F. N., & Rae, D., 1073, Mar. 24, Refrigerating, &c.
 ——— F. N., & Siddeley, J., 1726, May 10, Ice.
 ——— G., 91, Jan. 11, Purifying liquids; recovering, &c. waste products.
 ——— M., 200, Jan. 19, Compounds for dissolving resins, &c.
 McKee, H., 2979, Aug. 25, Balloons.
 Mackenzie, J. F., 93, Jan. 11, Hot-air apparatus.
 McKenzie, W., & Donovan, R. E., 3265, Sep. 18, Soaps.
 Mackie, R., 4001, Nov. 18, Spinning yarns.
 McKim, J. L., 3144, Sep. 7, Rotary steam-engines.
 Mackinnon, D., 2497, July 12, Writing instruments.
 McLachlan, J., 1761, May 11, Driving revolving shafts.
 McLaine, P., 4109, Nov. 26, Packing material.
 McLaren, A., 3041, Aug. 30, Saddle-boilers.
 ——— J., 2097, June 7, Portable and traction engines.
 McLaren, J., 415, Feb. 4, Watch protector.
 McLay, J. C. S., Warren, F. P., Brodie, W., & Wilson, M., 76, Jan. 8, Railway wheels and axles.
 McLean, A., 4034, Nov. 20, Portable ambulance.
 Mac Lellan, G., 3578, Oct. 15, Material of caoutchouc, &c.
 ——— W. (Sheward), 1179, Apr. 1, Screw-jacks.
 ——— W., & Smith, J. P., 3990, Nov. 17, Railway chairs.
 McLeod, F. H., 903, Mar. 11, Sheep dip or composition.
 McLintock, E. & R., 3045, Aug. 30, Slippers.
 ——— R. & E., 3045, Aug. 30, Slippers.
 McMillan, J., 3007, Aug. 27, Ships or vessels.
 McMin, W. K., 3457, Oct. 5, Pumps for ships, &c.
 Maenab, J., 3281, Sep. 18, Mining, drilling, and blasting.
 Macneill, Sir J., 2594, July 21, Water-meters.
 McNish, J., 3006, Aug. 27, Moulding pipes, &c.
 McPhail, W., 220, Jan. 20, Compositors' case frames.
 McPherson, J., 3108, Sep. 4, Fabrics for trimming.
 McPherson, T. H. N. (Lake), 3622, Oct. 19, Fuel.
 Macqueen, J., Rushton, T. H., & Dobson, B. A., 2292, [June 23, Combing machines.
 Maetear, J., 1714, May 8, Soda.
 Macvay, W. W., 1350, Apr. 14, Glass furnaces.
 McVicar, D. H. & M. (Haseltine), 27, Jan. 2, Teaching.
 ——— M. & D. H. (Haseltine), 27, Jan. 2, Teaching.
 Macvitie, W., 3676, Oct. 22, Attaching knobs to spindles; rack pullies.
 Madden, S., 944, Mar. 13, Folding brackets.
 ——— S., 1779, May 13, Regulating combustion in furnaces.
 Madderson, T., & Bradley, G., 63, Jan. 7, Crushing ores, &c.
 Maddock, W., 2757, Aug. 5, Nails.
 Maddox, J., Gardner, E., Hughes, T., & Dixon, G., 567, [Feb. 16, Fringes.
 Maes, L. (Fouillon), 331, Jan. 28, Gloves.
 Magerison, E., Cook, M., & M. G., & Nichols, H. S. (Tasker), 1043, Mar. 22, Bobbin-winder.
 Maglone, J., Hathaway, W. A., Snow, B. F., & Gregory, [W. (Lake), 4456, Dec. 22, Journal box bearings.
 Magner, P., & Kunemann, E. (Kuenemann), 194, Jan. 19, [Treating and dyeing vegetable textiles.
 Main, R., 127, Jan. 13, Ascertaining hot blast temperature.
 Maistre, F. Le, 2419, July 3, Attaching scarves, &c.
 Maitre, J. (Morgan-Brown), 1110, Mar. 27, Yoking horses.
 Maitrot, F. H., 3020, Aug. 27, Invalid back-rest.
 Major, W., 4354, Dec. 16, Preventing priming and incrustation in steam-boilers.
 Makaroff, S., 813, Mar. 4, Covering holes in ships' bottoms.
 Malcolm, D. R., 2339, June 28, Treating jute, &c.
 ——— S., & Vickers, M., 4215, Dec. 6, Motive-power.
 Malfroy, A. (David), 1791, May 14, Photographic apparatus.
 Malinet, Collière & Co. (Henderson), 2730, Aug. 3, [Woollen yarn.
 Mallaband, J., & Hadfield, R., 3689, Oct. 25, Wheels.
 Mallet, R., 144, Jan. 14, Producing inscribed plates.
 Mallinson, J., 1750, May 11, Sluice and slide-valves.
 ——— J., 2896, Aug. 25, Coeks and sluice-valves.
 Malo, G. (Clark), 404, Feb. 3, Ships or vessels.
 Malorey, A. J. Gravelaine, & Co., L. (Browne), 1088, [Mar. 25, Purging steam-engine cylinders.
 Malpas, C., 1064, Mar. 23, Kilns.
 Manbré, A., 579, Feb. 17, Treating vegetable substances; making spirits, &c.
 ——— A., 1724, May 8, Sugar.
 ——— A., Beldam, W. A., & Allibon, G., 264, Jan. 23, [Steam-boilers.
 Mancion, J. (Newton), 2833, Aug. 11, Preserving wood.
 Mancens, J. (Gedge), 2924, Aug. 19, Campaigning can-teen, &c.
 Manhes & Son (Browne), 2849, Aug. 12, Refining [copper.
 Manley, P., & Bolton, F., 2585, July 20, Mowing & reaping.
 ——— W. G. N., 4472, Dec. 23, Ambulance wheeled litter.
 Mann, C. M. (Lake), 4561, Dec. 31, Making cigars.
 Mann, E. & W. H., & Atkinson, W., 4095, Nov. 25, [Fuel economizers.
 ——— W., & Owens, S., 862, Mar. 9, Valves.
 Mann, W. D. A., & Paterson, W. W. (Alexander), 1017, [Mar. 19, Fittings of railway carriages, &c.
 Mann, W. H. & E., & Atkinson, W., 4095, Nov. 25, [Fuel economizers.
 Manning, J., 3386, Sep. 28, Printing.
 ——— R. H., 263, Jan. 23, Plane-irons.
 Mansbridge, H., 811, Mar. 4, Railway crossings.
 Manson, G. W. (Lake), 3869, Nov. 6, Motor for light machines.
 Mappin, W. S., 3832, Nov. 4, Fasteners for bands, straps, &c.
 Maquet, H. J., 281, Jan. 25, Railway carriage guard railings.
 Marais, E. L., & Durand, F., 1534, Apr. 27, Moulding bricks, &c.
 March, W., & Dalglish, R., 1611, May 1, Locking, &c. [railway points.
 ——— W., & Dalglish, R., 2959, Aug. 23, Guarding. [&c. railway points.
 Marchant, R. M., 304, Jan. 27, Furnaces.
 Marillier, R. A., 497, Feb. 10, Raising, tipping and lowering trucks.
 Marinoni, A. H. (Clark), 3240, Sep. 16, Printing.
 Mariotti, L., 1876, May 22, Covers for teapots, &c.
 Marks, D., Smith, W., & Summerscales, J., 2155, June 12, [Washing, wringing, and mangling.
 ——— W. H., Lund, T., & Gregg, J., 1372, Apr. 15, Tubes.
 Marland, A. (Clark), 4139, Nov. 29, Screw-nuts.
 Marler, E. T. (Reckendorfer), 215, Jan. 20, Pencil cases.
 Marot, L. (Johnson), 408, Feb. 3, Saccharine solutions.
 Marquand, A. Le (Clark), 815, Mar. 4, Metallic alloy.
 Marriott, E., 3636, Oct. 30, Moulding fuel.
 Marschalk, C. (Hughes), 1787, May 18, Lamps for diving.
 Marsden, B., 177, Jan. 16, Nuts for screw-bolts.
 ——— F. M., 985, Mar. 17, Button fasteners.
 ——— G. H., & Brearley, B. J., 4173, Dec. 2, Facing stone.
 ——— H., R., & J. D., 2117, June 9, Dyeing fabrics.

- Marsden, H. R. & J. D.**, 2845, Aug. 12, Dyeing, &c. fabrics.
 — **H. R.**, 2717, July 31, Crushing, &c. substances.
 — **J., & Collier, J.**, 790, Mar. 3, Looms.
 — **J., & Collier, J.**, 1349, Apr. 14, Looms.
 — **J. D., H. & R.**, 2117, June 9, Dyeing fabrics.
 — **J. D., H. & R.**, 2845, Aug. 12, Dyeing, &c. fabrics.
 — **R. J. D. & H.**, 2117, June 9, Dyeing fabrics.
 — **R. J. D. & H.**, 2845, Aug. 12, Dyeing, &c. fabrics.
Marshall, F. A., Skinner, C. W., & Hall, W. J., 530, [Feb. 13, Feed-heaters for boilers.
 — **J.**, 162, Jan. 15, Thrashing-machines.
 — **J.**, 3292, Sep. 30, Steam-boilers and furnaces.
 — **N.**, 583, Feb. 18, Fancy hosiery.
 — **N., & Hewitt, E.**, 4298, Dec. 10, Circular [machines for looped fabrics.
 — **T.**, 1805, May 14, Waterproof coats, &c.
 — **T.**, 3949, Nov. 12, Waterproof garments.
 — **T., & Fisher, E.**, 901, Mar. 11, Carts, &c.
Marshall, W. C., & Webb, J. M. & H. (Newton), 3947, [Nov. 12, Preserving meats.
Marsland, E. (Lake), 3508, July 12, Liquid-meter.
Martin, Abraham, 1608, May 1, Capsuling bottles, &c.
 — **Albert**, 4382, Dec. 17, Shearing animals.
 — **Alfred, & Simons, R. H.**, 1555, Apr. 28, Clip- [ping and shearing animals.
Martin, C. (Bonneville), 2, Jan. 1, Carding fibres.
 — **C. (Bonneville)**, 777, Mar. 3, Spinning machine [spindles.
 — **C. (Bonneville)**, 2591, July 21, Spinning fibres.
Martin, E., 4086, Nov. 25, Weaving.
 — **E., & Firth, W.**, 2014, June 2, Temples for weaving.
Martin, J., & Dauphinot, S. (Smith), 1082, Mar. 24, Spin- [ning.
Martin, James, 4459, Dec. 22, Flower-pots, vases, &c.
 — **John**, 4010, Nov. 18, Umbrellas and sunshades.
 — **John**, 4066, Nov. 23, Preventing fouling of ships' [bottoms, &c.
 — **John C.**, 64, Jan. 7, Emery wheels, &c.
 — **John C.**, 2374, June 30, Emery wheels, &c.
Martin, M. (Lake), 949, Mar. 18, Dressing flour.
Martin, T., 468, Feb. 8, Lamps.
 — **W.**, 3451, Oct. 5, Securing brooms, &c. to handles.
 — **W. J., & Ashley, J.**, 1922, May 26, Spinning.
 — **W. R., & Tylor, H.**, 2255, June 19, Bedsteads.
Martindale, A. F., 1721, May 8, Steam-cultivators.
Martius, C. A., 1584, Apr. 29, Dyeing or printing.
Martyn, H. (Thacker), 3017, Aug. 27, Sheet metal [boxes, &c.
Maskelyne, J. N., & Clarke, J. A., 1804, May 14, Actu- [ating automaton mechanism.
Mason, C. (Weatherby), 1660, May 4, Seats and backs [for chairs, &c.
Mason, C., & Beamish, A., 3065, Sep. 1, Preventing [radiation of heat.
Mason, J. A. 1395, Apr. 16, Washing-machines.
 — **M. F., & Anderson, G.**, 2904, Aug. 18, Bottling [and drawing off liquids.
 — **S. F., & Attenborough, J. G.**, 2761, Aug. 5, [Velocipedes.
Mason, V. W. (Clark), 2478, July 9, Safety winding [apparatus.
Mason, W., 245, Jan. 22, Preventing incrustation in [boilers.
Masse, J., Webster, W., & Bodel, L. G., 1559, Apr. 28, [Carriages, tricycles, &c.
Massey, E., & Goddard, F., 1358, Apr. 14, Heating.
 — **J. E.**, 1957, May 28, Date stamps, &c.
Masui, T. (Wise), 792, Mar. 3, Electric railway breaks.
Masurier, J., 3634, Oct. 20, Tanning and dyeing.
Mather, C., & Heywood, E., 1877, May 22, Embank- [ments, &c.
 — **J.**, 211, Jan. 20, Air-gas.
Mather, J., & Speir, R., 622, Feb. 20, Gas.
 — **W., & Cordillot, H. F. A.**, 479, Feb. 9, Steaming [printed fabrics.
 — **W., & Nicholson, W. N.**, 2291, June 23, Making [and collecting hay, &c.
Matheson, J. P., & Tavernier, L. F., 361, Jan. 30, Felted [fabrics.
Mathews, T., 3827, Nov. 3, Fluid-meters.
Mathewson, T. A., & Paine, G. W., 1679, May 5, Spool- [ing machines.
Mathian, V., & Solet, F. (Abel), 1545, Apr. 27, Heating [air, &c.
Mathias, J. F. & J. G. (Clark), 3766, Oct. 29, Colour- [ing, &c., furs.
 — **J. G. & J. F. (Clark)**, 3766, Oct. 29, Colour- [ing, &c. furs.
Matthews, G., 1089, Mar. 25, Rolling hoop-iron, &c.
 — **J.**, 3698, Oct. 25, Boilers and feed-heaters.
Matthews, M. J. (Hunt), 6, Jan. 1, Musical instruments.
Matthews, R. A., Berry, W. H., & New, A. J., 2301, [June 23, Lathes, &c.
 — **R. A., Berry, W. H., & New, A. J.**, 4273, [Dec. 9, Tool-holders and cutting tools.
 — **T.**, 4011, Nov. 18, Railway junctions.
 — **T. W., Leather, T. P., Richards, J., & Williams**, [D., 935, Mar. 13, Tin-plate.
 — **W. J.**, 2956, Aug. 23, Securing scaffolding, [timber, &c.
Matthiessen, F. O. (Newton), 1234, Apr. 5, Sugar.
 — **F. O. (Newton)**, 1439, Apr. 20, Sugar.
 — **F. O., & Rochow, F. (Clark)**, 1810, May 14, [Hydraulic-engines, &c.
Maw, E., 3699, Oct. 25, Preventing waste and entrance [of heat into refrigerating apparatus, &c.
Maxim, H. S. (Mills), 1932, May 26, Liquid-meters.
 — **H. S. (Mills)**, 2772, Aug. 5, Liquid-meters.
Maxwell, J. R., & Cope, E. (Benson), 3598, Oct. 16, [Steam-pumping or air-compressing engines.
Maxwell, N. M., 2131, June 10, Taps or cocks.
Maxwell-Lyte, F. (Clark), 563, Feb. 16, Ammonia.
May, G. (Budenberg), 4256, Dec. 8, Spark extinguishers.
Mayer, F., 2202, June 15, Couches, beds, berths, &c.
 — **H. C.**, 259, Jan. 23, Spirometers.
 — **H. C.**, 1371, Apr. 15, Slaughtering animals.
Maynard, H. N., 3557, Oct. 13, Tubular structures.
Maynard, J. A. (Vaughan), 1003, Mar. 18, Applying [oil painting to walls, &c.
Maynard, R., 879, Mar. 10, Chaff-cutters.
Maynz, E. (Gardner), 889, Mar. 10, Boot and shoe tips.
Mayston, H., 2745, Aug. 4, Scraping or cleaning tubes, &c.
Mazé-Launay, A., & Pellicieux, J. (Perrier), 4502, Dec. 24, [Kelp.
Meadows, W., 4228, Dec. 7, Releasing, &c. hanging bodies [or weights.
Meakin, J. F., 4164, Dec. 2, Sash-pulleys.
Mease, G. D., 977, Mar. 16, Sulphate of soda or potash; [bleaching powder.
Meason, J. C., 2680, July 28, Gas chandeliers.
Méhu, A., 3502, Oct. 8, Sail hank.
Meiter, C. W., 2850, Aug. 12, Ventilating garments; [life-saving apparatus.
Meharshi, L. (Lake), 3498, Oct. 8, Motive-power.
Melling, J., 2734, Aug. 3, Stoppers for "Bessemer" [ladles.
 — **T.**, 4028, Nov. 20, Regulating pressure in pipes, &c.
Meloon, D. C. & H. H., Toppan, D. L., & Chapin, G. B. [(Haseltine), 1009, Mar. 18, Wood-planing.
 — **H. H. & D. C., Toppan, D. L., & Chapin, G. B.** [(Haseltine), 1009, Mar. 18, Wood-planing.
Melton, F., 620, Feb. 20, Nail and other brushes.
Melvill, R. A., 554, Feb. 15, Fastening windows, &c.
Melvin, T., 3541, Oct. 12, Steam, &c. engines; pumping.

- Ménier, J. S. A., 1690, May 6, Propelling and steering balloons.
- Mercer, E. B. S., 1726, May 8, Castors for tables, &c.
- Merrall, E. R. G. & M., 2550, July 16, Scouring wool, &c.
- G., E. R. & M., 2550, July 16, Scouring wool, &c.
- M., G. & E. R., 2550, July 16, Scouring wool, &c.
- Merryweather, H. & J. C., & Jakeman, C. J. W., 1513, [Apr. 24, Locomotives and carriages.
- J. C. & H., & Jakeman, C. J. W., 1513, [Apr. 24, Locomotives and carriages.
- Mersanne, F. E. de (Johnson), 2787, Aug. 7, Electric signals, fires, and lights.
- Mershon, A. H. (Lake), 3387, Sep. 28, Heating apparatus.
- Mesdach, L., 776, Mar. 3, Accumulating hydrostatic pressure.
- Messenger, T., & Churchward, G. D., 2666, July 28, [Steam and other engines.
- Metcalf, H. (Newton), 771, Mar. 2, Holding, &c. cartridges.
- Metcalfe, J. & R., & Hamer, E., 2984, Aug. 25, Economising fuel in locomotives, &c.
- R. & J., & Hamer, E., 2984, Aug. 25, Economising fuel in locomotives, &c.
- Meunier, C. (Abel), 1433, Apr. 20, Flapped axles.
- Meusel, R. (Jensen), 1338, Apr. 13, Glass.
- Mewburn, J. C. (Lang & Desjardins), 2018, June 2, [Treating spinning waste.
- J. C. (Gay), 2360, June 29, Insulating jacket.
- J. C. (Santenaire), 2855, Aug. 13, Dredging machines.
- J. C. (Graissot), 3787, Nov. 1, Silk fabric.
- J. C. (Lamoitie), 4150, Dec. 1, Cues for billiards, &c.
- Meyer, A. dit Moyse, 2710, July 31, Velocipedes & wheels.
- Meyer, E., & Fournier, E. (Clark), 928, Mar. 12, Lace.
- Michaels, J. P. (Lake), 2439, July 6, Toys.
- Michel, D. (Alexander), 4088, Nov. 25, Carbonizing vegetable materials in wool, &c.
- Micheltore, W. H., & Reap, J., 2236, June 18, Mitre-cutting.
- Middleton, J., 1506, Apr. 23, Sink and other traps.
- W., 1881, May 22, Melting, refining, &c. iron.
- W., & Hayward, P., 493, Feb. 10, Melting, &c. metals.
- Midoz, F., & Chanoit, F. (Morgan-Brown), 4341, Dec. 15, [Filtering reservoir.
- Mieg, C. Thierry- (Clark), 1587, Apr. 29, Fixing, &c. colors on fabrics.
- Mignon, J. B. J., & Rouart, S. H. (Johnson), 973, [Mar. 16, Sugar; paper-pulp.
- J. B. J., & Rouart, S. H. (Johnson), 2647, [July 26, Treating sugar-cane.
- Migotti, A., & Raymond, H. J., 1622, May 1, Padlocks.
- Milbourne, J., 3082, Sep. 2, Pressing and ironing garments, hats, &c.
- Milburn, R., & Jackson, H., 518, Feb. 12, Treating salts, ores, &c.
- R., & Jackson, H., 933, Mar. 12, Crushing ores, &c.; concrete and cement.
- R., & Jackson, H., 1917, May 26, Treating salt.
- R., & Jackson, H., 4320, Dec. 13, Decomposing vapours.
- Miles, G. E., & Tonge, J., 2384, June 30, Drawing beer, &c. from casks.
- Millar, H. E., 3890, Nov. 9, Reversing gear for engines.
- R., 4370, Dec. 17, Tramway cars.
- Millbourn, C., 7, Jan. 1, Railway signalling.
- Miller, A. M. & Hill, C. G. (Haseltine), 2314, June 24, [Bag fasteners.
- Miller, C., & Craig, L. D., 4536, Dec. 30, Tenon joint fastening for chairs.
- J. A., 2768, Aug. 5, Bolting wheat products.
- T., 4089, Nov. 25, Break blocks for street cars, &c.
- Miller, T., & Jamieson, N., 1488, Apr. 23, Curtains.
- W., & Jarvie, N., 4295, Dec. 11, Making oakum.
- Miller, W. D. (Clark), 4345, Dec. 15, Fire-arms.
- Miller, W. R., 24, Jan. 2, Pianos.
- Milligan, S., & Bannister, R. D. (Lake), 2245, June 18, [Advertising.
- Milliken, W. H. (Clark), 1464, Apr. 21, Traction-engines.
- Mills, B. J. B. (Siprell), 246, Jan. 22, Rock-reamers, &c.
- B. J. B. (Conn), 782, Mar. 3, Musical instruments.
- B. J. B. (Chapman & Souther), 1688, May 6, Excavating.
- B. J. B. (Frad), 1770, May 12, Railway signals.
- B. J. B. (Maxim), 1932, May 26, Liquid-meters.
- B. J. B. (De Nayer & Co.), 2416, July 3, Steam-boilers.
- B. J. B. (Maxim), 2772, Aug. 5, Liquid-meters.
- B. J. B. (Libotte), 3011, Aug. 27, Safety apparatus for mine-cages, &c.
- B. J. B. (Jacot-Burmann), 3118, Sep. 6, Watches.
- B. J. B. (Taylor), 3472, Oct. 6, Battery guns.
- C. W., 2503, July 12, Discharging grain, &c. from vessels.
- D., 4279, Dec. 9, Sewing-machinery for boots, &c.
- E. C., & Haley, H., 265, Jan. 23, Gas-engines.
- J. A., 3176, Sep. 10, Furnaces.
- L., 2230, June 17, Surface condensers.
- Milner, Edward, 4053, Nov. 22, White lead.
- Ezra, 54, Jan. 6, Furnaces.
- Milward, V., 3725, Oct. 27, Polishing needles.
- Mincher, E., 2449, July 7, Buttons, and similar articles.
- Minns, H. R. (Hardy), 687, Feb. 25, Artificial leather.
- Miralles, F. (Budge), 1494, Apr. 23, Raising liquids.
- F. (Budge), 1495, Apr. 23, Heating and condensing liquids.
- Mirfield, M., & Scott, J., 3903, Nov. 10, Combing fibres.
- Mitchell, H. E., 3633, Oct. 20, Roller skates.
- James, 2655, July 27, Biscuits.
- John & T., 1019, Mar. 19, Stretching calico, &c.
- Joseph & W., 410, Feb. 3, Umbrellas and parasols.
- Mitchell, R. (Edwards), 3764, Oct. 29, Bent metal tubes.
- Mitchell, T. & J., 1019, Mar. 19, Stretching calico, &c.
- W., 2186, June 14, Hoeing and cutting out root crops, &c.
- W. & J., 410, Feb. 3, Umbrellas and parasols.
- W. H., 318, Jan. 27, Cut-off slide-valves.
- Moehring, H. G. (Johnson), 1882, May 22, Lamps.
- Moelchaerek, G. R., & Morgan, O. V., 625, Feb. 20, [Filtering water.
- Moerman-Laubuhr, T. (Clark), 1888, May 22, Ammoniacal salts.
- Moffatt, A., & Richardson, T. H., 3085, Sep. 2, Communicating in trains.
- A. C. B., 4202, Dec. 4, Feed-water heaters.
- Molard, J. (Newton), 2383, June 30, Valves & valve cocks.
- Molinier, C. (Gedge), 1117, Mar. 27, Tawing and dressing skins.
- Moller, W., & Stephens, W. A. (Newton), 1482, Apr. 22, [Blast-furnaces.
- Monchovaut, H. (Lake), 1899, May 24, Feeding-bottles.
- Monckton, E. H. C., 1884, May 22, Constructing and propelling ships.
- E. H. C., 3307, Sep. 21, Glass.
- E. H. C., Creasy, J. T., & Tully, W., 3396, [Sep. 29, Motive-power.
- Moncrieff, A. & L. N., & Gye, L., 1435, Apr. 20, Fire-arms.
- L. N. & A., & Gye, L., 1435, Apr. 20, Fire-arms.
- Mondain & Co. (Gedge), 2992, Aug. 26, Boots and shoes.
- Mondollot, A. A., 2001, June 1, Gaseous liquids.
- Money, E., & Bates, C. E., 3995, Nov. 17, Advertising.
- F. J., 1363, Apr. 15, Breaks for railway carriages.
- F. J., 1645, May 4, Breaks for railway carriages.

Monk, W., & Rawthorne, T., 435, Feb. 5, Carding-en-
[gine rollers.
Monks, J., 1526, Apr. 26, Shaving the face, &c.
Monrocq, J. N., & Goubet, C. D., 1560, Apr. 28, Trans-
[mitting motion.
Montaugé, R. E., & Brandely, A. A. (Tongue), 1477,
[Apr. 22, Corks or stoppers.
Monteith, J., 2603, July 21, Velocipedes.
—— J., 3753, Oct. 28, Rotary-engines.
Montejo, M. A., Pagan, O., & Ricart, T. L. (Lake),
[1709, May 7, Expanding tubes.
Montgomery, A., 2945, Aug. 21, Keys of organs, &c.
—— A., 3193, Sept. 11, Organs, pianos, &c.
—— R., 1760, May 11, Ejecting water from
[steam cylinders, &c.
Montoisson, J. L. de, 2110, June 9, Utilizing cards of
[carding-engines.
Moody, J. M. (Sutton), 2753, Aug. 4, Cinder-sifters.
Moore, A., 831, Mar. 5, Coating metallic sheets or
[fabrics.
—— A. & A. C., 354, Jan. 30, Sheet metal roofing.
—— A. C. & A., 354, Jan. 30, Sheet metal roofing.
—— B. T., 990, Mar. 17, Determining direction of
[currents.
Moore, G. R. (Clark), 2804, Aug. 9, Operating scull
[propellers, &c.
Moore, T., 3803, Nov. 2, Rotary-engines.
Morand, G., 3234, Sep. 16, Wiring, &c. hat and bonnet
[shapes.
Morce, J., 2389, July 1, Teeth cleansing compositions.
Moreau, E., 228, Jan. 21, Sewing-machines.
Morfit, C., 3938, Nov. 12, Dietetic foods.
Morgan, A. C., & Weir, J. G., 3321, Sep. 23, Railway
[signals.
—— E. E., Richards, D., & Morris, E. S., 4504, Dec. 24,
[Annealing, &c. iron plates.
—— O. V., & Moelchaerek, G. R., 625, Feb. 20,
[Filtering water.
—— R., 4388, Dec. 18, Smoke-consuming furnaces.
Morgan, R. P. (Newton), 1675, May 5, Elevated railway.
Morgan, T. (Pieper), 3708, Oct. 26, Drayman's safety-
[ladder.
—— T. (Sachsenberg & Brückner), 3794, Nov. 1,
[Reducing ores, &c.
—— T. (Moskovits), 4503, Dec. 24, Steam-boilers.
—— T. V., 1149, Mar. 30, Shaping crucibles, &c.
—— W. L., 1906, May 25, Rotary-engines.
Morgan-Brown, W. (Colaert), 90, Jan. 9, Shutters and
[windows.
—— W. (Crompton), 146, Jan. 14, Looms.
—— W. (Viglino & Donna), 626, Feb. 20,
[Motive-power.
—— W. (Verdier), 654, Feb. 23, Treating peat.
—— W. (Viglino & Donna), 729, Feb. 27,
[Railway axles.
—— W. (Doty), 952, Mar. 2, Lamps.
—— W. (Hermagis), 937, Mar. 13, Photo-
[graphic apparatus.
—— W. (Hagemann), 964, Mar. 16, Water
[or cascade air-pumps.
—— W. (Hagemann), 965, Mar. 16, Evaporat-
[ing fluids.
—— W. (Helden & Hill), 966, Mar. 16, Photo-
[graphic printing.
—— W. (Maitre), 1110, Mar. 27, Yoking horses.
—— W. (Harding & Johnson), 1335, Apr. 13,
[Treating sewage.
—— W. (Shuette), 1865, May 21, Photometers.
—— W. (Crompton), 1967, May 29, Boiler anti-
[incrustation battery.
—— W. (Davis), 2056, June 4, Composition
[for destroying insects, worms, &c.

Morgan-Brown, W. (Harding & Johnson), 2119, June 9,
[Type-writing machines.
—— W. (Sommerfeldt & Nissen), 2149, June 11,
[Writing, &c. secret dispatches.
—— W. (Dodge), 2200, June 15, Weaving
[and waterproofing fabrics.
—— W. (Johnson & Harding), 2250, June 19,
[Tramway rolling-stock.
—— W. (Ford & Dick), 2261, June 21, Sus-
[pending ships' berths, &c.
—— W. (Sherman & Goldsmith), 2345, June 28,
[Pumps.
—— W. (Gear), 2779, Aug. 6, Street railway
[cars.
—— W. (Halsted), 2790, Aug. 7, Spark ar-
[resters, &c.
—— W. (Brooks), 2889, Aug. 17, Attaching,
[&c. heels to boots.
—— W. (Goldsmith), 2922, Aug. 19, Lubri-
[cating material.
—— W. (Elwert & Pack), 3254, Sep. 17, Am-
[moniacal salts.
—— W. (Giacomini), 3880, Nov. 8, Carding
[wool, &c.
—— W. (Morse), 3894, Nov. 10, Hose-pipe
[couplings, &c.
—— W. (National Boot & Shoe Tip Co.),
[3895, Nov. 10, Shoe-tips.
—— W. (Dinsmore), 3896, Nov. 10, Sewing-
[machines.
—— W. (Rousseau), 3922, Nov. 11, American
[organs.
—— W. (Stevens), 4077, Nov. 24, Loom shut-
[tles; spindles.
—— W. (Guldbrandsen & Rettinger), 4123,
[Nov. 27, Glove sewing-machine.
—— W. (Dieckerhoff), 4155, Dec. 1, Explo-
[sive compounds.
—— W. (Hotchkiss), 4220, Dec. 6, Fire-arms.
—— W. (Rose & Rose), 4338, Dec. 15, Clean-
[ing grain.
—— W. (Midoz & Chanoit), 4341, Dec. 15,
[Filtering reservoir.
—— W. (Stacy), 4483, Dec. 24, Gear tackle
[for lifting, &c.
Mori, F., 3904, Nov. 10, Thermo-regulators.
Morier, W. J., 3834, Nov. 4, Beating, churning, &c. liquid
[compounds.
Morison, T., 3992, Nov. 17, Washing-machines.
Morley, R. (Godener), 2803, Aug. 9, Electric telegraphs.
Morrell, J. H. (Clark), 2024, June 2, Floodway for
[buildings.
—— J. H. (Clark), 3739, Oct. 28, Ventilation and
[water supply of buildings.
—— J. H. (Clark), 3923, Nov. 11, Floodways for
[buildings.
Morris, E. S., Morgan, E. E., & Richards, D., 4504, Dec. 24,
[Annealing, &c. iron plates.
—— J. M., & Simmons, J., 289, Jan. 25, Purifying gas.
—— R., W., & Hunter, J. C., 2632, July 24, Regis-
[tering rise and fall of liquids.
—— S., & Cryer, J., 4520, Dec. 29, Mules.
Morrison, A. F., 4531, Dec. 30, Casting pipes & gutters.
—— S., 3822, Nov. 3, Roller skates.
Morse, A. J. (Morgan-Brown), 3894, Nov. 10, Hose-pipe
[couplings, &c.
Morton, F. G., 1471, Apr. 22, Treating tin waste.
—— G. & J., 2902, Aug. 17, Roller skates.
—— J. & G., 2902, Aug. 17, Roller skates.
—— J. A., 3431, Oct. 2, Electric-bell indicator.
—— S., 2276, June 22, Securing handles to blades.
—— W. W., 880, Mar. 10, Fire-arms.

Moscheowitz, S. M., 3821, Nov. 3, Garment or overcoat.
 Moscrop, J. B., 1963, May 28, Doubling yarn.
 — T. B. F., 856, Mar. 8, Signalling on railways.
 — T. B. F., & Gibbons, J., 2180, June 14, Railway [signalling].
 Moseley, C., 3697, Oct. 25, Floors of skating rinks.
 Moshavits, M. (Morgan), 4503, Dec. 24, Steam-boilers.
 Mosman, D. F., 751, Mar. 1, Generating & utilizing steam.
 Moss, C. A., 3957, Nov. 13, Fruit preserves.
 — G., & Blake, W. A., 883, Mar. 10, Sewing-machines.
 — G., & Blake, W. A., 3520, Oct. 11, Sewing-machines; shuttles and bobbins.
 Motay, C. M. Tessié du (Abel), 1305, Apr. 10, Treating [wild silks for dyeing, &c].
 — C. M. Tessié du (Smith), 2812, Aug. 10, Bleaching [ing fibres].
 — C. M. Tessié du (Smith), 3669, Oct. 22, Bleaching [wool and silk].
 Mothe, B. J. la, 4213, Dec. 6, Metallic frames for railway cars, &c.
 Mothersill, R., 3769, Oct. 29, Adjusting sewing-machine [needles].
 Mott, W. H., 1269, Apr. 8, Trimming pianoforte hammers.
 Mouillera, C., & Canard, F., 4021, Nov. 19, Sinking wells.
 Moulton, O. H., Damon, L. S., Rice, I. L. G., & Parker, [R. H. (Henderson)], 3916, Nov. 11, Warping.
 Mountford, E. C. & W., 292, Jan. 26, Games.
 — W. & E. C., 292, Jan. 26, Games.
 Mouricy, A. (Tamet), 3081, Sep. 2, Preserving bread.
 Mowbray, G. M. (Gardner), 2132, June 10, Electric [battery].
 Mowbray, W. R., 2736, Aug. 3, Coating waggon sheets, &c.
 Moy, T., 2977, Aug. 25, Steam-engines.
 — T., 3648, Oct. 21, Feeding water to steam-boilers.
 Moyne, J. H. le, 750, Mar. 1, Mule and shuttle spindle.
 Moyse, A., dit Meyer, 2710, July 31, Velocipedes & wheels.
 Muchin, M. K. (Brewer), 4464, Dec. 23, Bricks and tiles.
 Mueller, F. (Sonnenthal), 1394, Apr. 16, Locking doors.
 Mueller, G., 2120, June 9, Registering apparatus.
 Muir, A., 1801, May 14, Lathes.
 — E., 3554, Oct. 13, Dredging machines.
 — T., 2560, July 17, Meal and flour; and product [from same].
 Muirhead, A., & Taylor, H. A., 684, Feb. 24, Telegraphs.
 — James, 2869, Aug. 14, Studs for sleeves, &c.
 — John, 3374, Sep. 27, Electric-telegraphs.
 — John, Clark, J. L., & Warden, W. M., 2707, [July 30, Galvanic-batteries].
 Mulholland, J. R. T., & Porter, W. M., 647, Feb. 22, [Carding-engines].
 Müller, F. (Proellocks, frères), 4367, Dec. 16, Keyless [watches].
 Müller, H. (Murdoch), 1885, May 22, Blasting charges.
 — H. (Murdoch), 2135, June 10, Compressing gun-powder.
 — R. (Brewer), 758, Mar. 2, Railway couplings.
 Mulholland, H. (Rogers), 161, Jan. 15, Cut nails.
 Mulligan, B. T., & Reed, A. (Clark), 115, Jan. 12, Knitting.
 Mullord, A., 4460, Dec. 22, "Satining" paper.
 Mumford, J. V., 3665, Oct. 21, Lime and cement kilns.
 Munn, A., 2743, Aug. 4, Sinking cylinders for foundations.
 — A., Rennie, J., & Sutherland, J., 419, Feb. 4, [Sinking cylinders for foundations].
 Munro, B., 1713, May 8, Tools for cutting stone, &c.
 — B., 3864, Nov. 6, Tools for cutting coal, &c.
 — W., 1762, May 11, Pump for forcing water.
 — W. S. J. H., 2289, June 23, Cutting or felling [timber].
 Muntz, P. M., 2700, July 30, Sheathing ships.
 Murch, C. M. (Dixon), 2063, June 4, Reflectors.
 Murdoch, G., 1711, May 8, Tobacco.
 — H. H. (Follett), 1357, Apr. 14, Sewing-machines.

Murdoch, H. H. (Honnaij), 1397, Apr. 16, Treating [spent tan].
 — H. H. (Müller), 1885, May 22, Blasting [charges].
 — H. H. (Hoyois), 2095, June 7, Pipe-joints.
 — H. H. (Müller), 2135, June 10, Compressing [gunpowder].
 — H. H. (Stevens), 3172, Sep. 10, Mitrailleur.
 Murfey, E. D. (Newton), 1025, Mar. 19, Bearing, &c. [surfaces for shafting].
 Murgatroyd, J., & Parker, J., 2748, Aug. 4, Railway [couplings].
 Murphy, T. H., 3596, Oct. 16, Bale-ties.
 Murray, A. W., 382, Feb. 2, Lamps.
 — C. H., 3768, Oct. 29, Bricks, tiles and pipes.
 — G., 3405, Sep. 30, Cattle-trucks.
 — J. W., Collins, R., & Longsdon, D., 1444, Apr. 21, [Ships].
 — T., & Crighton, S., 3400, Sep. 30, Earthenware [bottles, &c].
 — W. M., & Bartlett, J., 1746, May 11, Printing; [type].
 Musgrave, J. M. Sagar, Akeroyd, J. B., & Ward, D., [2572, July 19, Pump buckets and valves].
 — S. H., 1508, Apr. 24, Skin rasps.
 Mutel, V., & Dubuc, E. (Autier), 2898, Aug. 17, Wash- [ing clothes, &c].
 Mutton, A., 4004, Nov. 18, Roller skates.
 Myers, H., & Holland, W., 34, Jan. 4, Umbrellas, &c.
 Myers, M., 570, Feb. 17, Pen boxes, &c.
 Mylchreest, D., 2082, June 5, Clip and socket fastening.
 — D., & Cooke, W., 4469, Dec. 23, Steam- [generators].
 Myles, W., & Levey, C., 670, Feb. 23, Nuts and washers.
 Myring, C., 1486, Apr. 23, Preventing horses slipping.
 — C., 4097, Nov. 25, Handles for bags, &c.

N.

Nacyer, de & Co. (Mills), 2416, July 3, Steam-boilers.
 Nairn, A., & Deas, J., 1695, May 7, Excavators.
 — M. B., 35, Jan. 4, Floor-cloths.
 Napier, F., 1109, Mar. 27, Steering apparatus.
 — J. M., 1736, May 10, Turning, &c. potters' clay.
 — J. M., 3074, Sep. 1, Embossing and stamping.
 — J. M., 4125, Nov. 27, Speed indicators & governors.
 — W. D., 633, Feb. 20, Tooth and flesh brushes.
 Nardi, F. D., 216, Jan. 20, Boots and shoes.
 Nash, C., 1285, Apr. 9, Lacing boots and shoes.
 National Boot & Shoe Tip Co. (Morgan-Brown), 3895, [Nov. 10, Shoe-tips].
 Naylor, J., & Kitson, A., 2601, July 21, Closing, &c. [doors of railway carriages].
 Nedler, F. W., 1609, May 1, Registers for vehicles.
 Neech, R. W. (Vaughan), 3341, Sep. 24, Gauges.
 Needham, J., 2793, Aug. 7, Fire-arms.
 — S., 2489, July 10, Lamps, &c. for tram cars.
 Neil, C., 402, Feb. 3, Stocks and dies.
 — G., & Fry, J. E., 2114, June 9, Bessemer converters.
 Neilson, J., 4231, Dec. 7, Preventing & extinguishing fires.
 Nelson, J., 1561, Apr. 28, Drilling machines.
 — L., & Anderson, I. E. (Paine & Paine), 2049, [June 3, Electro-magnetic motors, &c].
 — L., & Paine, E. L. (Paine), 4118, Nov. 26, [Electro-magnetic motors].
 — W., 145, Jan. 14, Scarf clip or adjuster.
 — W., 1990, May 31, Steel pens, &c.
 Netherwood, W., & Shaw, B., 1859, May 20, Bottles and [stoppers].

Neuhaus, M., 668, Feb. 23, Gas.
 — M. (Wiese), 2517, July 13, Signalling at sea
 [and on land].
 — M., & Hodgkin, J. E. (Blake), 3867, Nov. 6,
 [Steam-pumps].
 Neumann, R. E. G., 4018, Nov. 19, Safes, &c.
 Neuss, H. F. (Wirth), 703, Feb. 25, Making needles.
 New, A. J., Matthews, R. A., & Berry, W. H., 2301,
 [June 23, Lathes, &c].
 — A. J., Matthews, R. A., & Berry, W. H., 4273,
 [Dec. 9, Tool holders and cutting tools].
 Newbold, E., 267, Jan. 23, Furnace bars.
 — E., 1698, May 7, Arch and rake for furnaces.
 — H., 2964, Aug. 24, Indicating contents of
 [casks, &c].
 Newcomb, T. & T. H., 1893, May 24, Cutting wood.
 — T. H. & T., 1893, May 24, Cutting wood.
 Newlands, B. E. R., & Duncan, J., 4107, Nov. 26, Sugar, &c.
 — B. E. R. & J. A. R., & Duncan, J., 4264, Dec. 8,
 [Treating saccharine products].
 — J. A. R. & B. E. R., & Duncan, J., 4264, Dec. 8,
 [Treating saccharine products].
 Newman, J., 2939, Aug. 20, Coverings for omnibuses, &c.
 — J., 3384, Sep. 28, Fastenings for permanent
 [way of railways].
 Newsam, J., & Shackler, H., 1989, May 31, Thrashing.
 Newsome, C. H., & Fenton, J. & W., 14, Jan. 1, Carding,
 [&c. fibres].
 Newsom, G., 3401, Sep. 30, Lithographing and printing.
 Newton, A. V. (Borchardt), 385, Feb. 2, Bullet patching
 [machinery].
 — A. V. (Felt), 600, Feb. 18, Ordnance.
 — A. V. (Metcalf), 771, Mar. 2, Holding, &c.
 [cartridges].
 — A. V. (Good), 876, Mar. 9, Drawing fibres.
 — A. V. (Matthiessen), 1234, Apr. 5, Sugar.
 — A. V. (Matthiessen), 1439, Apr. 20, Sugar.
 — A. V. (West), 1456, Apr. 21, Embroidering
 [and braiding].
 — A. V. (Palmer), 1457, Apr. 21, Finishing cloth, &c.
 — A. V. (Morgan), 1575, May 5, Elevated railway.
 — A. V. (Davis, Griggs, & Pusey), 1735, May 10,
 [Carriage wheels and axles].
 — A. V. (Kreeft), 1843, May 19, Railway crossings.
 — A. V. (Andrews), 1925, May 26, Hoisting apparatus.
 — A. V. (Requa), 2074, June 5, Waterproof com-
 [pounds].
 — A. V. (Requa), 2075, June 5, Waterproof bags, &c.
 — A. V. (Brooks), 2150, June 11, Metal tubes, &c.
 — A. V. (Folk), 2352, June 28, Sewing-machines.
 — A. V. (Wolff), 3943, Nov. 12, Pianofortes.
 — A. V. (Webb, Webb & Marshall), 3947, Nov. 12,
 [Preserving meats].
 — A. V. (Ashley & Ashley), 4527, Dec. 29, Feed-
 [ing printing presses, &c].
 — E., 624, Feb. 20, Frame saws.
 — E., 2356, June 29, Frame saws.
 — E., 4027, Nov. 19, Frame saws.
 — G. E., 878, Mar. 10, Steam-boilers.
 — G. J., 3863, Nov. 6, Twist lace machines, &c.
 — H. E. (Nobel), 153, Jan. 14, Burners for lighting.
 — H. E. (Murfey), 1025, Mar. 19, Bearing, &c.
 [surfaces for shafting].
 — H. E. (Stephens & Moller), 1482, Apr. 22, Blast-
 [furnaces].
 — H. E. (Carré), 1634, May 3, Grates for fire-
 [places, &c].
 — H. E. (Babbitt), 1676, May 5, Rotary-engines.
 — H. E. (Wolff), 1785, May 13, Pianofortes.
 — H. E. (Davison), 2106, June 8, Ordnance.
 — H. E. (D'Argence & Delamare), 2161, June 12,
 [Ornamenting fabrics].

Newton, H. E. (Molard), 2883, June 30, Valves and
 [valve cocks].
 — H. E. (Pihet), 2452, July 7, Mortising machines.
 — H. E. (Nobel), 2523, July 13, Burners.
 — H. E. (Fish), 2614, July 22, Looms.
 — H. E. (Campbell), 2679, July 28, Cutting and
 [folding paper].
 — H. E. (Mancion), 2833, Aug. 11, Preserving wood.
 — H. E. (Helie), 2936, Aug. 20, Cooking.
 — H. E. (Schmetzer), 3156, Sep. 8, Toys.
 — H. E. (Ikonnikoff), 3590, Oct. 15, Supplying
 [water to steam-boilers].
 — H. E. (Constant), 3630, Oct. 19, Packing piston-
 [rods].
 — H. E. (Campbell), 3647, Oct. 20, Printers' inking
 [apparatus].
 — H. E. (Orr & Bancroft), 3711, Oct. 26, Padlocks.
 — H. E. (Verdie), 3771, Oct. 29, Heating furnaces, &c.
 — H. E. (Nobel), 4179, Dec. 2, Explosive com-
 [pounds].
 — H. E. (Fryer), 4369, Dec. 16, Metal furnaces.
 — H. R., 3542, Oct. 12, Regulating, &c. water-supply.
 — R., 3167, Sep. 9, Feeding furnaces.
 — W. E. (Berrens), 894, Mar. 10, Extracting mer-
 [cury, &c. from ores].
 — W. E. (Hibry), 1185, Apr. 1, Spinning.
 — W. E. (Giesendorff), 1186, Apr. 1, Folding
 [chairs, &c].
 — W. E. (Sindermann), 1216, Apr. 3, Treating
 [faecal matters].
 — W. E. (Allen), 1423, Apr. 19, Illustrating the
 [earth's motion, lines of light, heat, &c].
 — W. E. (Ball & Fitts), 1440, Apr. 20, Water-meters.
 — W. E. (Cramer), 2913, Aug. 18, Dredging or
 [excavating].
 — W. E. (Von Dreyse), 4198, Dec. 4, Fire-arms.
 — W. E. (Hoe), 4321, Dec. 13, Preparing paper for
 [printing].
 — W. E. (Hoe), 4386, Dec. 18, Printing machinery.
 Newton, W. H. (Lake), 3784, Oct. 30, Dredging.
 Nézeaux, P., 1272, Apr. 8, Balance with counter.
 Niblett, F., 1254, Apr. 7, Iron safes and fastenings.
 — F., 2501, July 12, Safes, strong-rooms, &c.
 Nicholas, James, 1116, Mar. 27, Carbonising coal, slack, &c.
 — John, 1569, Apr. 29, Indicating water-level.
 — John, 2539, July 15, Indicating water-level.
 Nichols, H. S., Magerison, E., & Cook, M. & M. G.
 [(Tasker), 1043, Mar. 22, Bobbin-winder.
 Nichols, W. S., 4211, Dec. 6, Washing fibres.
 Nicholson, E., & Topp, N. & A., 283, Jan. 25, Carding-
 [engines].
 — J. (Gardner), 2162, June 12, Cutlery.
 — W., & Scovell, G., 2432, July 5, Looking-glasses.
 — W. N., & Mather, W., 2291, June 23, Making
 [and collecting hay, &c].
 Nickols, D., 4243, Dec. 8, Plaiting fabrics.
 Nicoll, D., 1933, May 26, Ships; preserving ships' bottoms,
 [metal, wood, &c].
 — D., 2347, June 28, Paving roads, &c.; building.
 — D., 2348, June 28, Preparing, &c. food.
 — D., & Hinds, W., 2440, July 6, Fog-signals.
 Niemann, G., & Geiger, T. (Hildebrandt), 316, Jan. 27,
 [Tramways].
 Nimmo, J., 3899, Nov. 10, Signalling on railways.
 Nisbeth, A. F. H., & Vispé, J. L. (Brunius), 1666, May 5,
 [Signalling on railways].
 Nissen, C., & Sommerfeldt, E. J. (Morgan-Brown), 2149,
 [June 11, Writing, &c. secret dispatches].
 Noad, J., 592, Feb. 18, Steel.
 — J., 1087, Mar. 25, Fire-lighters; cutting fire-wood.
 — J., 2493, July 10, Fibre from wood, rags, &c.
 Nobel, A. (Newton), 153, Jan. 14, Burners for lighting.

Nobel, A. (Newton), 2523, July 13, Burners.
 — *A.* (Newton), 4179, Dec. 2, Explosive compounds.
Noble, A., 4161, Dec. 1, Breech-loading ordnance.
 — *J.*, & *Roberts, D.*, 2732, Aug. 3, Furnaces.
Nordenfeldt, O. (*Bjorkman*), 2459, July 8, Explosive compounds.
Norfolk, A., 2258, June 21, Condensing steam.
 — *R.*, 2574, Oct. 14, Moulding, &c. axle-boxes.
Norman, J., 3414, Oct. 1, Wyper wheels for riddles.
 — *T.*, 3559, Oct. 14, Making salt cake.
Normand, A. (*Johnson*), 3516, Oct. 9, Condensing steam, &c.
Normand, E., & *Guéneux, J.*, 3185, Sep. 11, Making coloured impressions on tin plate, &c.
Normandy, A. L., 2581, July 20, Distilling machinery.
Norminton, W. R., 3051, Aug. 31, Pianofortes.
Norris, James, 1315, Apr. 10, Actuating churns, &c.
 — *James*, 2940, Aug. 20, Actuating washing machines, churns, &c.
Norris, John (*Haseltine*), 1163, Mar. 31, Cypher correspondence.
North, T. (*Tomlinson*), 130, Jan. 13, Axle-boxes.
Norton, C. D., 2243, June 18, Saving gas in trains, &c.
 — *C. D.*, & *Lyle, J. G.*, 3343, Sep. 24, Telegraphic communication.
Norwood, G. (*Cox & Hosmer*), 1067, Mar. 24, Needle (and button for upholstery purposes).
Notton, S., 743, Mar. 1, Cutting or carving wood, &c.
 — *S.*, 2791, Aug. 7, Cutting or carving wood, &c.
Novello, J. A., 2624, July 23, Vessels; propelling same.
Nowell, T. S., & *Thompson, S. R.* (*Hunt*), 4235, Dec. 7, Grinding and "rossing" bark.
Nunn, J., & *Tuddenham, S.*, 4473, Dec. 23, Skates.
Nurse, G., 3970, Nov. 15, Finishing tin andterne plates.
 — *G.*, 3971, Nov. 15, Coating metal plates.
Nussey, G. H., & *Leachman, W. B.*, 139, Jan. 14, Punching and rivetting machines, &c.
Nuttall, J. & T., 1114, Mar. 27, Cutting jacquard cards.
 — *T. & J.*, 1114, Mar. 27, Cutting jacquard cards.
Nye, F. C. (*Johnson*), 765, Mar. 2, Snap-hooks.
 — *F. C.* (*Johnson*), 766, Mar. 2, Snap-hooks.
 — *F. C.* (*Johnson*), 767, Mar. 2, Snap-hooks.

O.

Oakes, B. A. (*Reynolds*), 3443, Oct. 4, Drying fruit, &c.
Oakley, G. N., & *Quarrill, R.* (*Lake*), 4514, Dec. 28, Press for copying, &c.
O'Brien, E. A. (*Halsey*), 3464, Oct. 5, Stopping bottles.
O'Brien, J. P., 1016, Mar. 19, Capsuling bottles, &c.
Odams, J., & *Blackburn, R.*, 2358, June 29, Treating sewage.
Odling, F. J., 2477, July 9, Fibrous slabs; expressing oils.
O'Donoghue, J. T. (*Clark*), 1748, May 11, Ratchet for window-blinds, &c.
Oezle, O. (*Johnson*), 561, Feb. 16, Grinding corn, &c.
Okes, J. C. R., 3713, Oct. 26, Steam-boilers.
 — *J. C. R.*, & *Crohn, F. W.*, 3446, Oct. 4, Engine and pump.
Okes-Voysey, R. W., *Balfour, A. J.*, *Hamilton, J. B.*, & *Wade, G. E.*, 1585, Apr. 29, Musical instruments.
 — *R. W.*, *Hamilton, J. B.*, & *Wade, G. E.*, 2029, June 2, Musical instruments.
Okey, J., 1215, Apr. 3, Boots and shoes.
O'Lawlor, L. M. de *Bejar y, & Calvo, N. A.*, 2101, June 8, Telegraphy.
Oldershaw, H. A., 2923, Aug. 19, Boots and shoes.
Oldroyd, J., & *Blamires, T. H.*, 1427, Apr. 19, Waddings (and felted fabrics).
 — *J.*, & *Blamires, T. H.*, 2858, Aug. 13, Waddings (and felted fabrics).

Oliver, G., 3366, Sep. 25, Gymnastics.
 — *J.*, 3752, Oct. 28, Preparing and winding fibres.
 — *J.*, & *Butterworth, C.*, 4190, Dec. 3, Bobbins.
Olivier, J., 1470, Apr. 22, Railway breaks.
Olivier, L. (*Clark*), 1108, Mar. 25, Cutting timber.
Olmsted, J. (*Benson*), 4482, Dec. 24, Telegraphs.
Olpherts, R., 560, Feb. 16, Screw-presses, &c.
O'Neill, J., & *Bond, R.*, 1212, Apr. 3, Temples for looms.
Onken, G. A., & *Ritter, W.*, 2871, Aug. 14, Planing machines.
Oppenheimer, D. (*Holland*), 1707, May 7, Needles.
 — *J.*, 2240, June 18, Fixing telegraph posts.
Oram, H., 1582, Apr. 29, Sewing-machines.
Orcutt, J., & *Hobbs, A. C.* (*Brookes*), 125, Jan. 13, Cartridges.
Orme, D., 2130, June 10, Yarn counters or indicators.
Ormerod, E., 801, Mar. 4, Winding machinery, hoists, &c.
 — *E.*, 2438, July 6, Preventing overwinding in mines, &c.
 — *J.*, & *Porteous, D.*, 3166, Sep. 9, Sizing yarns.
Ormsen, H., 317, Jan. 27, Hot-water apparatus.
Orphin, J. J., 3012, Aug. 27, Snuff-box and deliverer.
Orr, W., & *Bancroft, J. S.* (*Newton*), 3711, Oct. 26, Padlocks.
Orrah, A., & *Dean, W.*, 3878, Nov. 8, Weaving, &c.
Orum, M. L., (*Richards*), 2885, Aug. 16, Mandrels.
Osborne, D. M. (*Lake*), 471, Feb. 8, Harvesters.
Osmond, J., 547, Feb. 15, Dog-carts, &c.
 — *J.*, 2756, Aug. 5, Dog-carts, &c.
 — *S. T.*, 2324, June 25, Wheels.
Ostberg, J. W. (*Jensen*), 3958, Nov. 13, Apparel for protection against fire, &c.
Oswin, R. B., 1188, Apr. 1, Cigars.
O'Toole, J. W., 3977, Nov. 16, Motive-power engines.
Otto, E. C. F., 1306, Apr. 10, Steam-engines.
Otto, N. A., (*Abel*), 3615, Oct. 18, Gas and air-engines.
Outerson, A. & J., 558, Feb. 16, Filters.
 — *J. & A.*, 558, Feb. 16, Filters.
Outridge, J. E., 2108, June 8, Valves.
Owen, J., 960, Mar. 16, Life-preserver.
 — *J.*, & *Binns, T. S.*, 1312, Apr. 10, Chains.
Owens, H. T., 4476, Dec. 23, Miners safety-lamps.
 — *J. F.*, & *Brough, H.*, 1205, Apr. 3, Fire-alarms.
 — *S.*, & *Mann, W.*, 862, Mar. 9, Valves.

P.

Pack, J. J. M., & *Elwert, J. H.*, (*Morgan-Brown*), 3254, Sep. 17, Ammoniacal salts.
Packer, D. F. (*Richards*), 739, Mar. 1, Artificial fuel.
Packer, O., 2888, Aug. 17, Double-slide box cocks.
 — *T.*, & *Smith, J. C.*, 4306, Dec. 11, Ribs for umbrellas, &c.
Packman, F. J. W., 2574, July 20, Steam-engine condenser.
Padwick, W. F., 3919, Nov. 11, Poultry and game coop.
Pagan, O., *Ricart, T. L.*, & *Montejo, M. A.* (*Lake*), 1709, May 7, Expanding tubes.
Page, H., & *Turner, C.*, 778, Mar. 3, Removing hair from hides, &c.
 — *H. L.*, 1504, Apr. 28, Studs for collars, &c.
 — *J.*, 2814, Aug. 10, Trimmings.
Paget, H. S., 3661, Oct. 21, Painting houses, china, &c.
 — *H. S.*, 3773, Oct. 30, Painting designs on china, &c.
Paine, E. L., & *H. M.* (*Nelson & Anderson*), 2049, June 3, Electro-magnetic motors, &c.
Paine, E. L., & *Nelson, L.* (*Paine*), 4118, Nov. 26, Electro-magnetic motors.

Paine, G. W., & Mathewson, T. A., 1679, May 5, Spooling [machines].
 — H. M., (Paine & Nelson), 4118, Nov. 26, Electro-magnetic motors.
 — H. M. & E. L. (Nelson & Anderson), 2049, [June 8, Electro-magnetic motors, &c.]
 Paling, S. (Paling), 8055, Aug. 31, Window-blind rollers.
 Paling, T. H. (Paling), 8055, Aug. 31, Window-blind rollers.
 Palling, F., 8053, Aug. 31, Lamps.
 Palliser, W., 8819, Nov. 3, Terrace dwelling-houses.
 Palmer, F. R., & Stubbs, G., 4152, Dec. 1, Hat and bonnet shapes.
 — H. T., 345, Jan. 29, Mules and mule doublers.
 Palmer, J. E. (Newton), 1457, Apr. 21, Finishing cloth, &c.
 Palmer, J. H., 3820, Nov. 8, Fire-arms.
 — W., 3039, Aug. 30, Signalling in trains.
 Pamphilon, J., 2364, June 29, Manure spreading machine.
 Pape, T., 1625, May 3, Filtering & deodorizing sewage.
 Paper Box Machine Co., Cleveland (Haseltine), 1008, [Mar. 18, Paper boxes].
 Pare, H. B., 800, Mar. 4, Feeding and other bottles.
 Paris, J., & Adam, J., 1346, Apr. 14, Packing cases for bottles, &c.
 Parker, C. (Hughes), 61, Jan. 6, Claw hammers.
 Parker, E. L. (Fisk), 1246, Apr. 6, Braces.
 — G., 556, Feb. 16, Riddling and loading coal, &c.
 — J., & Murgatroyd, J., 2748, Aug. 4, Railway couplings.
 — J. W., 2372, June 30, Steam-engines.
 — R., 1300, Apr. 10, Distributing manures.
 — R., 2853, Aug. 13, Distributing manures.
 — R., 4378, Dec. 17, Ventilating, &c. sewers.
 Parker, R. H., Moulton, O. H., Damon, L. S., & Rice, J. L. G., (Henderson), 3916, Nov. 11, Warping.
 Parker, W. H., & Elliott, J., 2484, July 10, Blind-rollers.
 Parkes, A., 841, Mar. 6, Furnaces.
 — J., 4457, Dec. 22, Candlesticks.
 — T., 4229, Dec. 7, Ladies' compendium.
 Parkin, R. W., 2827, Aug. 11, Locks for safes, &c.
 Parkins, J., 1214, Apr. 3, Bordering cards, paper, &c.
 Parkinson, J., 4428, Dec. 21, Treating ores.
 — R., Catlow S., & Blackburn, B., 720, Feb. 26, [Mules].
 Parib, R., 2575, Oct. 15, Portable wardrobes.
 Parlour, J. T., 1459, Apr. 21, Opening & closing windows.
 — J. T., 3445, Oct. 4, Raising sunken ships, &c.
 Parnell, E. A., 2148, June 11, Arsenic acid, &c.
 Parratt, G. F., 1600, Apr. 30, Life-rafts.
 Parsons, & Grist, (Willson), 1940, May 27, Knitting machines.
 Partington, G., Davies, E., & Leyland, J., 2586, July 20, [Bolts, set-screws, and screw-bolts].
 — T. & W., & Wolstenholme, J., 3219, Sep. 15, [Shuttles].
 — W. & T., & Wolstenholme, J., 3219, Sep. 15, [Shuttles].
 Partridge, B., 2355, June 29, Fire-arm device.
 Pascal, L. A. (Bonneville), 3978, Nov. 16, Measuring liquids.
 Pasfield, T., 3858, Nov. 5, Steam-breaks.
 Pass, E. de (Hénard), 2500, July 12, Fire-arms.
 — E. de (Vidard), 2916, Aug. 18, Railway carriages [and cars; lighting same].
 — E. de (Imbs), 3953, Nov. 13, Twisting, &c. threads [for cleaning].
 — M. & M. D., 3203, Sep. 13, Disintegrating or pulverising.
 — M. D. & M., 3203, Sep. 13, Disintegrating or pulverising.
 Pastorelli, F. J., 3706, Oct. 26, Measuring velocity of air currents, &c.

Pastré, A. M. G. (Johnson), 4379, Dec. 17, Steam-engine [indicators].
 Pate, W. (Cattell), 3594, Oct. 16, Refrigerating and ventilating.
 Paternotte, G., & Larmoyeux, V. (Gedge), 2227, June 17, [Railways and tramways].
 Paterson, R. O., & Brothers, F. W., 2880, Aug. 16, Salts [of ammonia].
 Paterson, W. W., & Mann, W. D. A. (Alexander), 1017, [Mar. 19, Fittings of railway carriages, &c.]
 Paton, G., 3979, Nov. 16, Dyeing and dressing yarns.
 — W., 3119, Sep. 6, Fabric for table, floor mats, &c.
 Patrick, A. (Roe), 2741, Aug. 4, Belt fastener.
 — R., 2499, July 13, Rotary-pumps and engines.
 — W., 2830, Aug. 11, Fishing nets and netting.
 Patterson, W. T., 3021, Aug. 27, Making button-holes.
 Patton, J. A., & Allatt, J. D., 8931, Nov. 12, Stoppering [bottles].
 Patzschke, J., 4113, Nov. 26, Billiard tables.
 Paucksch, H. (Walker), 1099, Mar. 25, Steam-boilers.
 Paul, A., 1795, May 14, Windlasses.
 — R., & Sanderson, W., 898, Mar. 11, Glass furnaces.
 Payne, E. & F. C., 4337, Dec. 14, Tobacco cartridge.
 — F. C. & E., 4337, Dec. 14, Tobacco cartridge.
 Payton, W., & Holmes, J. E., 843, Jan. 29, Saws and [sawing machinery].
 — W., & Holmes, J. E., 1567, Apr. 29, Steam, and [other engines; raising, &c. liquids].
 Peacock, J. C., & Rudkin, T., 590, Feb. 18, Cooking, &c.
 — T., & Stirling, J., 1224, Apr. 5, Utilising waste heat.
 — T., & Stirling, J., 3486, Oct. 2, Utilising waste heat.
 Pearce, T., 3083, Sep. 2, Fastenings for belts or bands.
 — W., 2782, Aug. 6, Reels for ships' logs.
 Pearn, F. & S., 3875, Nov. 8, Steam-engines.
 — S. & F., 3875, Nov. 8, Steam-engines.
 Pearce, E. E., 1489, Apr. 23, Glucose or grape sugar.
 Pearson, D. R., 516, Feb. 12, Brush handles and backs.
 — D. T. & T. T., 4360, Dec. 16, Bed-quilts, petti-coats, &c.
 — J., 3183, Sep. 11, Solitaires, sleeve-links, &c.
 — T. T. & D. T., 4360, Dec. 16, Bed-quilts, petti-coats, &c.
 Pearson, W. (Lake), 1050, Mar. 22, Sewing hosiery.
 Pearson, W., & Willis, C., 1491, Apr. 23, Pumps, &c.
 — W., & Roxby, E. W., 2390, July 1, Safety-valves.
 Péaud, L. L., 3760, Oct. 29, Treating fibre for spinning, &c.
 Peberdy, S., & Howson, H. (Johnson), 1418, Apr. 19, [Needles].
 Peck, J. F. (Clark), 49, Jan. 5, Life-mattresses, pillows, &c.
 Pedder, J. N., 4421, Dec. 21, Heating smoothing irons, &c.
 Peebles, D. B., 2328, June 26, Gas governors.
 Peel, J., 3492, Oct. 8, Securing handles to brush heads.
 — J., & Shackleton, E., 840, Mar. 6, Looms.
 Peirce, A. E., 1190, Apr. 2, Portable houses for poultry, [game, &c.]
 Pellieux, J., & Mazé-Launay, A. (Perrier), 4502, Dec. 24, [Kelp].
 Pellow, W. H. (Barclay & Kennedy), 3295, Sep. 21, Horse-rakes.
 Pendleton, H. G., 337, Jan. 28, Fastenings for braces, [purses, &c.]
 Penrice, H. N., 2999, Aug. 26, Rock tunnelling, &c.
 Pérard, V. (Gedge), 4214, Dec. 6, Alarm or thief detector.
 Perceval, K. J., 1830, May 18, Fire-proof ships, buildings, &c.
 Percy, J., 1802, May 14, Raising, &c. ships' boats.
 — T., 2362, June 29, Loom shuttles and batterns.
 — W. C. S., 3214, Sep. 14, Railway couplings, breaks [and signals].
 — W. C. S., 3393, Sep. 29, Omnibuses, &c.
 Periodiques, La Société Anonyme de Publications (Johnson), 1663, May 4, Printing photographs.

Perkins, F. E., 3663, Oct. 21, Sewing-machine needles, &c.
 — L., 224, Jan. 20, Steam-engines, &c.
 — Samuel & Clark, J., 3186, Sep. 11, Dressing cases.
 — Stanhope, & Smellie, W., 218, Jan. 20, Furnaces.
 — T., 3420, Oct. 1, Thrashing machines.
 — W., 533, Feb. 13, Communicating in trains.
 Perks, T., 3881, Nov. 8, Earrings.
 Perlau, A. (Bonneville), 1314, Apr. 24, Preventing
 [breakage of glass chimneys, &c.
 Pernot, C. (Christy), 3150, Sep. 8, Puddling furnaces.
 Perrelle, G. de la (Guérin), 2437, July 6, Preserving food.
 Perrier, J. W. C. (Pellieux & Mazé-Launay), 4502, Dec. 24,
 [Kelp.
 Perry, E. & G., 4193, Dec. 3, Moulding glass, &c.
 — G. & E., 4193, Dec. 3, Moulding glass, &c.
 — J. J., 233, Jan. 21, Wheel skates.
 — J. J., & Jones, R. A., 12, Jan. 1, Lighting cigars, &c.
 — R. G., 152, Jan. 14, Drying peat, &c.
 Person, T. (Clark), 2318, June 24, Artificial flowers.
 Petersen, M., 2052, June 4, Chronometer escapements.
 Peterson, C., 2330, June 26, Indicating revolutions and
 [speed of engines, &c.
 Pether, W. R., & Hesketh, W. J., 3742, Oct. 28, Stop-
 [valve.
 Petillat, A. (Haddan), 851, Mar. 8, Mowing & reaping.
 Petingale, J. L., 4474, Dec. 23, Admixing, &c. digestive
 [principles.
 Petit, H. J., 501, Feb. 10, Sewing-machines.
 Petitdidier, J. B. C. H., 1094, Mar. 25, Dyeing fabrics.
 Petitjean, P., Labbé, F., & Drevelle, A. (Browne), 2386,
 [June 30, Casters.
 Pettitt, A., 2795, Aug. 9, Indexing and binding ledgers, &c.
 Pettitt, G. (Taaffe), 1026, Mar. 19, Roller skates.
 Pfau, J. F. A., & Walker, B., 719, Feb. 26, Hydraulic
 [machinery.
 Pfeleiderer, P. (Freyburger), 4116, Nov. 26, Kneading and
 [mixing substances.
 Phelps, C. W., R. & G., 3568, Oct. 14, Feeding-bottles.
 — G., C. W., & R., 3568, Oct. 14, Feeding-bottles.
 Phelps, H. W., & Winchester, E. S. (Haseltine), 485,
 [Feb. 9, Rock-drills.
 Phelps, R., G., & C. W., 3568, Oct. 14, Feeding-bottles.
 Philippe, F. (Johnson), 4157, Dec. 1, Wheelbarrows.
 Phillips, J. E., Innocent, J., Rutter, G. T., & Hornsby, R.,
 [3482, Oct. 7, Reaping and mowing.
 — S. E., & Johnson, W. C., 3798, Nov. 2, Tele-
 [graph cables.
 — T. D., Trick, W., Davis, D., & Daniel, E. F.,
 [3909, Nov. 10, Iron.
 — W., 984, Mar. 17, Waterclosets.
 — W. H., 2393, July 1, Producing pictorial effects.
 — W. H., 3394, Sep. 29, Taps and valves.
 Phipps, T. L., & Burman, W., 2216, June 16, Horse clippers.
 Picard, B., & Cheynet, S. (Henderson), 1999, June 1, Cloth.
 — B., & Laurent, A. (Henderson), 3369, Sep. 27,
 [Aërial vessel.
 Picheral, J., 2344, June 28, Velvet pile carpets.
 Pichler, S. F., & Gardner, E. V., 4486, Dec. 24, Raising
 [and lowering weights.
 Pichon, J. (Bonneville), 3018, Aug. 27, Tobacco-box.
 Pickard, I., 1842, May 19, Covering cops of threads.
 Pickerill, E., 2724, Aug. 2, Twist lace fabrics.
 Pickering, J., 2247, June 18, Steam-engine pistons, &c.
 — T., 1969, May 29, Protecting openings to hoists.
 Pickford, G., & Walker, J., 3741, Oct. 28, Lubricating
 [spindles.
 Pictet, R. P., 2727, Aug. 3, Sulphurous acid; producing
 [cold.
 Pidgeon, J., & Lees, T., 260, Jan. 23, Hats.
 Piehlner, C., 3499, Oct. 8, Rail and tramway crossings.
 Piel, A. A., 4281, Dec. 9, Squeezing lemons, &c.
 — R., 3549, Oct. 13, Fire-arm.

Pieper, A. (Morgan), 3708, Oct. 26, Drayman's safety-
 [ladder.
 Pieper, C. (Kaselowsky), 535, Feb. 13, Steam-boilers.
 Pieri, P., & Smith, W., 342, Jan. 29, Bidon and drink-
 [ing bottle.
 Pigott, G., & Carver, J., 41, Jan. 4, Twist lace machines.
 Pihet, A. E. A. (Newton), 2452, July 7, Mortising ma-
 [chines.
 Pike, A. W., 1485, Apr. 22, Preserving life and property
 [afloat.
 — T., 2552, July 16, Boots and shoes.
 Pilbrow, J., 835, Mar. 6, Skates.
 — J., 4249, Dec. 8, Wheel skates.
 Pile, L. F. (Johnson), 3224, Sep. 15, Casks, &c.
 Pilkington, William, & Embley, H., 3670, Oct. 22, Grain-
 [ing wood.
 — Woodford, & Beaumont, F. E. B., 4196,
 [Dec. 4, Roller skates.
 Pilté, A., 2072, June 5, Horse-shoes.
 Pinchbeck, J., 669, Feb. 23, Fire-lighters.
 — J., 1696, May 7, Working in wood.
 Pinching, A. E., 1949, May 27, Safety-lamps.
 Pinfold, J. G., & Browne, W. R., 3696, Oct. 25, Steam-
 [engines.
 Pini, S., 3087, Sep. 2, Mills.
 Pinkerman, W. J. (Presby), 3758, Oct. 29, Lamps.
 Pinnington, G., 3058, Aug. 31, Pumps.
 Pirie, T., 2496, July 12, Thinning turnips, &c.
 Pitchford, W. F., 726, Feb. 27, Dissolving gums.
 Pitts, G. Y., 2694, July 30, Treating skins and leather.
 Pittsburgh Chain and Car Link Co. (Lake), 2973, Aug. 24,
 [Welding chain links.
 Place, J. H., & Green, T., 3026, Aug. 27, Churns and
 [washing machines.
 Plant, G., 1539, Apr. 27, Steam-generators; flues.
 — G., 3884, Nov. 9, Welding & shaping metal plates.
 Plessner, J. M., 2534, July 14, Cap or stopper-mounts
 [for bottles.
 Plimsoll, H. D., 2370, June 29, Railway trucks, &c.
 Plunkett, J. R., 3408, Sep. 30, Condensing steam.
 Pocknell, G., 1191, Apr. 2, Needle threaders.
 Pocock, A. W., & Jennings, J. G., 1599, Apr. 30, Liquid-
 [meters.
 — A. W., & Jennings, J. G., 4192, Dec. 3, Water-
 [waste preventers.
 Poilly, E. de, & Scott, J. S., 4068, Nov. 23, Lighting gas-
 [burners, &c.
 Pollard, J., & Wright, M., 133, Jan. 13, Driving spindles.
 Pollock, J. F. M., 3235, Sep. 16, Bricks.
 — J. F. M., & Powley, H., 2530, July 14, Grinding
 [pans of mills.
 — W. M., 1833, May 18, Finishing fabrics.
 Poole, W. (Lowe), 29, Jan. 4, Cutting blind slats.
 — W., & Whittaker, T., 2280, June 22, Fire-lighters.
 Pope, A. A. (Pope), 4136, Nov. 29, Cigarettes.
 Pope, A. W., 4258, Dec. 8, Artificial leather.
 — A. W. (Pope), 4136, Nov. 29, Cigarettes.
 — R. P., 159, Jan. 15, Walls, floors, roofs, &c.
 — R. P., 448, Feb. 6, Trapping waterclosets, &c.
 Popoff, M. A., 1693, May 6, Cover for waterclosets, &c.
 Poppenhusen, A., 2354, June 29, Combs.
 Poret, E., Baffoy, P. H., Dupré, P. S. E., & Rogé, H. N.,
 [(Clark), 288, Jan. 25, Preserving woven fabrics.
 Portait, E. P. E., & Weber, C. P. (Clark), 28, Jan. 2,
 [Preparing fibres for spinning.
 Porteous, A. N., & Bruce, G. C., 3264, Sep. 18, Propel-
 [ling tramway cars, &c.
 — D., & Ormerod, J., 3166, Sep. 9, Sizing yarns.
 — D. S., 3619, Oct. 19, Ripping and clipping
 [machines.
 Porter, A., 1383, Apr. 16, Watch pockets.
 Porter, E. B. (Clark), 1042, Mar. 22, Screw-propellers.

Porter, E. V., & Lawrence, J. E., 791, Mar. 3, Centrifugal pumps.
 — E. V., & Lawrence, J. E., 1515, Apr. 24, Engines [and pumps].
 — G., 480, Feb. 4, Gas-burners.
 — G., 967, Mar. 16, Fire-guards.
 — R., & Carey, R., 902, Mar. 11, Valves.
 — R., & Carey, R., 2315, June 24, Steam-engines.
 Porter, W. H. (Holmes), 2311, June 24, Springs for [carriages, &c].
 — W. H. (Holmes), 3781, Oct. 30, Spring for carriages, &c.
 Porter, W. M., & Mulholland, J. R. T., 647, Feb. 22, [Carding-engines].
 Pothetos, A., 4065, Nov. 23, Raising water.
 Potter, A. H. (Lake), 2985, Aug. 25, Watches, &c.
 Potter, E. P., 658, Feb. 23, Concentrating acids.
 — W. H., 2429, July 5, Ships and vessels.
 Potts, J. C., & Darnell, D. C. W., 272, Jan. 23, Ventilating waterclosets, &c.
 Pouget, —, Bonniot, —, & Febvre, V. (Clark), 4147, [Nov. 30, Operating sewing-machines].
 Pounsett, R., 447, Feb. 5, Vinegar.
 Poupard, C. G., 3381, Sep. 28, Cinder-sifters.
 Powell, C. T., & Dangerfield, J., 3533, Oct. 12, Printing [cartridge cases, &c].
 Powell, H. C., & Bartrum, W. E., 3316, Sep. 22, Rotary [engines, pumps, or meters].
 — R. (Clark), 2997, Aug. 26, Iron ships.
 Powleson, W. L., 2565, July 17, Steam superheaters.
 Powley, H., & Pollock, J. F. M., 2530, July 14, Grinding [pans of mills].
 Pradier, M. A., 2456, July 8, Studs, sleeve-links, &c.
 — M. A., 4333, Dec. 14, Fastening shirt-studs, &c.
 Pratt, W. T. C., 2975, Aug. 25, Coupling, &c. railway [carriages].
 Pregardan, J. (Hessel), 1636, May 3, Steam-boilers.
 Preiswerk, L., 2184, June 14, Propelling vessels; motive [power, &c].
 — L., 4324, Dec. 13, Propelling vessels; motive [power, &c].
 Prentice, M., 1758, May 11, Phosphates of alumina.
 — M., 4391, Dec. 18, Concentrating sulphuric [acid, &c].
 — M., 4392, Dec. 18, Platinum vessels.
 Presby, L. A. (Pinkerman), 3758, Oct. 29, Lamps.
 Prestage, F., 2160, June 12, Buildings; bricks, &c.
 — F., 2332, June 26, Railway wheels.
 — F., 3192, Sep. 11, Bricks and tiles.
 Price, E. & E., 4205, Dec. 4, Shoes for horses, &c.
 — E. W. L., 3582, Oct. 15, Ships' anchors.
 — H., 639, Feb. 22, Oil lamps.
 — J. T., 4102, Nov. 26, Ruling machines.
 Priest, A. & E., & Law, J., 940, Mar. 13, Carding-engines.
 — E. & A., & Law, J., 940, Mar. 13, Carding-engines.
 Priestland, C., & Harrison, F. A., 3667, Oct. 21, Lever [buckles].
 Prince, J. P., 2573, July 19, Surgical syringe.
 Prior, M., 1809, May 14, Pistons, &c.; lubricant.
 Prioux, T., & George, J. L. M., 2430, July 5, Ink pencils.
 Pritchard, H., 1158, Mar. 31, Sledge skate.
 — T., 2504, July 12, Iron water spouting.
 Pritchett, H., & Winder, R., 1475, Apr. 22, Horse-shoes.
 Pritt, R., 4489, Dec. 24, Separating flour, wheat, &c.
 Proctor, D. R. (Clarke), 4012, Nov. 18, Spark arresters.
 Proctor, J., 2047, June 3, Supplying fuel to furnaces.
 Proellocks, frères (Müller), 4367, Dec. 16, Keyless watches.
 Prosser, W., 861, Mar. 9, Roadways, tramways, &c.
 — W., 3466, Oct. 6, Lamps for electric-light.
 Pryor, M. R. (Leijbold), 4307, Dec. 11, Preserved meat.
 Publications Periodiques, La Société Anonyme de (Johnson), 1668, May 4, Printing photographs.

Puente, S., 436, Feb. 5, Sheep-shear.
 Pulbrook, A., 2910, Aug. 18, Signalling in trains.
 Pulford, G. C., 1235, Apr. 5, Glass reflectors for lamps, &c.
 Pullman, A. B., & Allen, R. N., 1112, Mar. 27, Railway [wheels].
 — A. B., & Sterne, L., 1180, Apr. 1, Railway draw [and buffer apparatus].
 — A. B., & Allen, R. N., 1297, Apr. 9, Railway [wheels].
 Punshon, R., 2260, June 21, Ordnance.
 — R., 4268, Dec. 9, Nitro-glycerine.
 Pusey, R. A., Davis, R. W., & Griggs, A. C. (Newton), [1735, May 10, Carriage wheels and axles].
 Puskás, T. (Schindler), 1218, Apr. 3, Railway breaks.
 Putnam, E., 1400, Apr. 16, Spring rollers for blinds.
 Pütz, P. (Jensen), 4538, Dec. 30, Fire-places.
 Pye, R., 70, Jan. 8, Shuttle springs.
 Pyle, J., 2758, Aug. 5, Boring machinery.
 Pzillas, R., & Kohrig, R. (Bousfield), 2486, July 10, Sugar.

Q.

Quackenbush, H. M., 3448, Oct. 4, Air-gun darts.
 Quarrill, R., & Oakley, G. N. (Lake), 4514, Dec. 28, [Press for copying, &c].
 Queen, J. W., & Co. (Beck), 689, Feb. 25, Prism.
 Quick, J., & Restler, J. W., 696, Feb. 25, Liquid-meters.
 Quillfeldt, C. de, & Hutter, K. (Clark), 4438, Dec. 22, [Stopping bottles, &c].
 Quin, R., 4403, Dec. 18, Cases for jewellery, plate, &c.
 Qvist, P. M. (Jennings), 4092, Nov. 25, Oil fuel.

R.

Rabache, A. (Gedge), 4024, Nov. 19, Ploughs.
 Rabot, E., 2925, Aug. 19, Smoke consuming and inodorous furnaces.
 Radeke, W., 1027, Mar. 19, Artificial fuel.
 Radford, R. H., 1147, Mar. 30, Steam-ship propellers.
 — R. H., 1173, Apr. 1, Fluid-motors, &c.
 Rae, D., & Mackay, F. N., 1073, Mar. 24, Refrigerating, &c.
 Raine, B. W., J. & W., 3433, Oct. 2, Iron.
 — J., B. W. & W., 3433, Oct. 2, Iron.
 — W., J. & B. W., 3433, Oct. 2, Iron.
 Ralston, W., 3523, Oct. 11, Waterproofing paper.
 Rammell, T. W., 3587, Oct. 15, Centrifugal machines; [motive-power].
 Ramsay, F. (Low), 1956, May 28, Sail hank or shackle.
 — H. M., 4420, Dec. 21, Filters; purifying sewage.
 Ramsden, J. C., 221, Jan. 20, Driving band.
 — J. C., 3110, Sep. 4, Metal fabric.
 — J. C., 4189, Dec. 3, Applications of metals.
 — W. T., 1160, Mar. 31, Furnaces.
 Ramspacher, T. (Christy), 832, Mar. 6, Tanning.
 Randall, T. B., 2252, June 19, Drawing liquids from casks, &c.
 Randolph, C., 1648, May 4, Moulding bricks or blocks.
 Rankin, R., 942, Mar. 13, Tobacco-pipes.
 Ransom Syphon Condenser Co. (Sault), 3543, Oct. 12, [Steam-condensers].
 Ransome, A., 3395, Sep. 29, Jointing staves.
 — A., 3823, Nov. 3, Felling trees.
 — J. E., & Ling, G., 3261, Sep. 17, Lawn-mowers.
 Ratcliff, F. & W. H., 3155, Sep. 8, Heating annealing [pots].
 — F. & W. H., & Cornforth, S., 3826, Nov. 3, Gas.

- Ratcliff, F., & W. H., & Cornforth, T., & J., 3944, Nov. 12, [Steam-blowing apparatus.]
 — W. H., & F., 3155, Sep. 8, Heating annealing [pots.]
 — W. H., & F., & Cornforth, S., 3826, Nov. 3, Gas.
 — W. H., & F., & Cornworth, T. & J., 3944, [Nov. 12, Steam-blowing apparatus.]
 Rath, F., 3717, Oct. 26, Finishing fabrics.
 — F., & Scantlebury, W., 232, Jan. 21, Creased or [plaited fabrics.]
 Rawbone, J. L. (Rawbone), 955, Mar. 15, Cartridge creasers.
 Rawbone, W. G. (Rawbone), 955, Mar. 15, Cartridge [creasers.]
 Rawlings, H., 1053, Mar. 23, Filters.
 Raworth, B. A., & J. S., 3968, Nov. 15, Winding yarns.
 — J. S., & B. A., 3968, Nov. 15, Winding yarns.
 — J. S., & Brentnall, S., 3425, Oct. 2, Beetling, [&c., fabrics.]
 Rawson, C., & Slater, J. W., 3703, Oct. 25, Treating [sewage.]
 Rawsthorne, T., & Monk, W., 435, Feb. 5, Carding-en- [gine rollers.]
 Raymond, H. J., & Migotti, A., 1622, May 1, Padlocks.
 Rayner, H., & Crookes, W., 2678, July 28, Absorbing [acid vapours.]
 Raynor, G., 3790, Nov. 1, Tunnels.
 Rayson, R. C., 4060, Nov. 22, Loom shuttles.
 Read, W., 379, Feb. 2, Buttons; attaching same.
 — W., 3525, Oct. 11, Fasteners for gloves, &c.
 Reap, J., & Michelmores, W. H., 2236, June 18, Mitre- [cutting.]
 Reaser, W. T. (Clark), 3599, Oct. 16, Buckles.
 Reckendorfer, J. (Marler), 215, Jan. 20, Pencil-cases.
 Redfern, T., Smith, P., & Law, J. H., 431, Feb. 5, Paper.
 Redford, G., & Harries, T., 4528, Dec. 29, Artificial fuel.
 Redheffer, W. (Benson), 388, Feb. 3, Freezing, churn- [ing, &c.]
 Redhouse, J., 1184, Apr. 1, Binding edges of hat shapes, &c.
 Redman, T. B., & Siggery, E. C., 273, Jan. 23, Railways [Couplings.]
 Redmayne, T., 3200, Sep. 13, Kitchen-ranges.
 Redmond, D. D., 3397, Sep. 30, Roller skates.
 Redstone, A. E., 3982, Nov. 16, Card printing press.
 Redwood, T. B., 2685, July 29, Gas.
 Ree, W., & Dunlop, A., 1890, May 24, Dressingstone, &c.
 — W., & Dunlop, A., 4120, Nov. 27, Tools, &c., for [dressing stone, &c.]
 Reed, A., & Mulligan, B. T. (Clark), 115, Jan. 12, Knitting.
 Reed, T. F., 1092, Mar. 25, Screw-propellers.
 Rees, D., 4073, Nov. 24, Calves' feet jelly tablets.
 — E., & Gardner, S., 320, Jan. 28, Fire-bars.
 — T. H., 3095, Sep. 3, Producing designs on sheet metal.
 Reeves, G. P., & Train, E. H. (Haddan), 4375, Dec. 17, [Lace or cord fasteners.]
 Reeves, T., 424, Feb. 4, Sewing-machines.
 Reford, J. W., 4036, Nov. 20, Distilling.
 Reid, H., & Hubbersty, H. A., 3817, Nov. 3, Grinding [minerals, &c.]
 — W., 166, Jan. 15, Sewing-machines.
 — W., 1500, Apr. 23, Sewing-machines.
 — W., 1811, May 15, Saturating yarns, &c.
 — W., 3319, Sep. 23, Treating yarns.
 Reilly, J., 2213, June 16, Casings, &c. for steam-boilers.
 Reimann, J., 997, Mar. 18, Sewing-machines.
 Reinhold, H. A., 4167, Dec. 2, Cleaning smoking pipes [and cigar tubes.]
 Reishauer, G. G., & Bluntschli, F. C. (Abel), 2172, [June 14, Bending railway rails.]
 Reith, A., 983, Mar. 17, Speaking tubes.
 Relph, F. H., 1982, May 31, Carrying cattle, &c. in ves- [sels or carriages.]
 Remington, E., & Sons (Lake), 2579, July 20, Pistol.
 Rendel, A. M., 697, Feb. 25, Swing bridges.
 — G. W., 1123, Mar. 27, Gear for sheer-legs, &c.
 — R., 4224, Dec. 6, Bottling liquids.
 Rennie, J., Sutherland, J., & Munn, A., 419, Feb. 4, [Sinking cylinders for foundations.]
 Renshaw, D. (Renshaw), 2698, July 30, Steam-generators.
 Renshaw, R. (Renshaw), 2698, July 30, Steam-generators.
 — W., & Dutton, R., 3553, Oct. 13, Finishing [velvets, &c.]
 Renton, W., Johnson, J., & Lowe, S., 2379, June 30, [Cutting flocks or rags, &c.]
 Requa, L. F. (Newton), 2074, June 5, Waterproof com- [pounds.]
 — L. F. (Newton), 2075, June 5, Waterproof bags, &c.
 Restler, J. W., & Quick, J., 696, Feb. 25, Liquid-meters.
 Rettinger, J. C., & Guldbrandsen, P. E. (Morgan-Brown), [4123, Nov. 27, Glove sewing-machines.]
 Reynolds, A. J. (Oakes), 3443, Oct. 4, Drying fruit, &c.
 Reynolds, E., 2323, June 25, Cranked shafts and axles.
 — E., 2399, July 2, Cranked shafts and axles.
 — F. S., & Brierley, W. W., J. & F. W., 201, [Jan. 19, Railway signals and points.]
 — F. S., & Brierley, J., F. W. & W. W., 1284, [Apr. 9, Railway points and switches.]
 — F. S., & Brierley, J., F. W. & W. W., 2028, [June 2, Railway points and switch bars.]
 — F. S., & Brierley, J., F. W. & W. W., 2118, [June 9, Railway signals.]
 — F. W., 709, Feb. 26, Saw-benches.
 — G. H., 2287, June 23, Rock-drilling machines.
 — J. 3337, Sep. 24, Forge tuyeres.
 — O., 724, Feb. 27, Motive-power; raising, &c. [fluids.]
 — W. F., 319, Jan. 27, Ships' logs.
 Reynoso, A. F. C. (Hunt), 1558, Apr. 28, Sugar.
 Rhames, R. W., 1626, May 3, Gas-burners.
 Rhodes, B. & T. B., 16, Jan. 1, Flocking fabrics.
 — B. & T. B., & Stoney, J. R., 941, Mar. 13, Re- [ducing flocks, mungo, &c.]
 — B. & T. B., & Stoney, J. R., 1511, Apr. 24, [Washing, &c. fabrics.]
 — G. J., 4203, Dec. 4, Roller skates.
 — J., 3412, Oct. 1, Crockery suspenders.
 — S. G., Shillito, M., & Speed, J. L., 1432, Apr. 20, [Finishing yarn and threads.]
 — T. B. & B., 16, Jan. 1, Flocking fabrics.
 — T. B. & B., & Stoney, J. R., 941, Mar. 13, Re- [ducing flocks, mungo, &c.]
 — T. B. & B., & Stoney, J. R., 1511, Apr. 24, [Washing, &c. fabrics.]
 Ribourt, L. (Abel), 1226, Apr. 5, Locomotives; regu- [lating pressure of steam, &c.]
 Ricart, T. L., Montejo, M. A., & Pagan, O. (Lake), [1709, May 7, Expanding tubes.]
 Rice, I. L. G., Parker, R. H., Moulton, O. H., & Damon, L. S. [(Henderson), 3916, Nov. 11, Warping.]
 Richard, A. F. (Gedge), 2144, June 11, Treating wood.
 Richard, J. M., W. M. & W., 2195, June 15, Printing.
 — W. J. M. & W. M., 2195, June 15, Printing.
 — W. M., W. & J. M., 2195, June 15, Printing.
 Richards, Alfred (Richards), 3777, Oct. 30, Life-saving [garments.]
 Richards, Augustus C. (Bonneville), 2649, July 26, Type- [setting machines.]
 Richards, D., Morris, E. S., & Morgan, E. E., 4504, Dec. 24, [Annealing, &c., iron plates.]
 — James, 2582, July 20, Breaks for carriages.
 — John (Orum), 2885, Aug. 16, Mandrels.
 — John M. (Packer), 739, Mar. 1, Artificial fuel.
 — Josiah, Williams, D., Matthews, T. W., & Leather, [T.P., 935, Mar. 13, Tin-plate.]

Richards, S., Stubbs, J., & Glover, J., 2136, June 10, [Doubling and winding yarns, &c.]
 Richards, T. (Duncan), 3020, June 2, Numbering coupons, [cheques, &c.]
 ——— T. (Richards), 3777, Oct. 30, Life-saving garments.
 Richardson, C., 1774, May 12, Treating saccharine matters.
 ——— C., 4131, Nov. 29, Brooms and brushes.
 ——— C., & Beck, W. H., 1650, May 4, Looms.
 ——— F. C., 1985, May 31, Furnace bars.
 ——— J., 3901, Nov. 10, Traction-engines.
 ——— J., & Ball, C. J., 564, Feb. 16, Steam-engine and air-compressor.
 ——— J. S., & Legge, A. H., 1968, May 29, Steam-engines.
 Richardson, M. C., & Johnson, M. (Lake), 8126, Sep. 6, [Hoes].
 Richardson, T. E., 4487, Dec. 24, Roller skates.
 ——— T. H., & Moffatt, A., 3085, Sep. 2, Communicating in trains.
 ——— W., 4252, Dec. 8, Boilers for warming buildings.
 ——— T. H., 3750, Oct. 28, Employing aerated water [for producing steam in boilers].
 Riches, W. A., 1952, May 28, Feeding or mixing grains [or seeds].
 ——— W. A., 2673, July 28, Fire-arms.
 Richmond, T., & Catlow, C., 32, Jan. 4, Looms.
 ——— T., & Clayton, J., 4350, Dec. 15, Looms.
 ——— W., 3893, Nov. 10, Lowering, &c. ships' boats.
 Riddell, W., 2316, June 24, Chloride of lime.
 Rideal, S., 113, Jan. 12, Framework covering for floors, &c.
 Ridealgh, C., & Clough, G. A., 1821, Apr. 12, Puddling.
 Rider, A. K. (Tongue), 3404, Sep. 30, Air-engines.
 Rider, F. W., & Hutchence, H., 388, Feb. 2, Harmoniums, organs, &c.
 Rieux, E. J. J. B. D. du (Brookes), 2412, July 3, Gas.
 Rigby, F., Greenwood, E., & Kilburn, R. & J. E., 4169, [Dec. 2, Railway couplings].
 ——— John, & Scott, W. M., 312, Jan. 27, Fire-arms.
 ——— John & Joseph, 2487, July 10, Ventilating and [warming].
 ——— Joseph & John, 2487, July 10, Ventilating and [warming].
 Rigg, H., & Eaglesham, J., 3969, Nov. 15, Cooling and [lubricating pumping machinery].
 Rikli, M. A. (Johnson), 1793, May 14, Rail and tramway vehicles; signalling in same.
 Riley, J., 4530, Dec. 30, Travelling combustion furnaces.
 ——— J., & Haslam, W., 1143, Mar. 30, Winding yarns.
 ——— W., 2625, July 23, Lighting fires.
 ——— W. H., 2854, Aug. 13, Safety apparatus for steam-generators, &c.
 Rimington, A. W., 2630, July 24, Registering delivery of [measures].
 ——— J. McN., Shepherd, E., Rothwell, F. & T., & [Hough, J. E., 350, Jan. 29, Sewing-machines].
 Rinaldini, A., & Costa, T. (Fellinger), 1525, Apr. 26, [Catching insects].
 Rippingille, E. A., 4137, Nov. 29, Lamps.
 Risler, G. A. (Clark), 3229, Sep. 15, Spinning.
 Ritchie, D. D., 1034, Mar. 20, Holding, cutting, and [gilding books, paper, &c.].
 ——— G. & J. G., 1422, Apr. 19, Quilted fabrics, &c.
 ——— G., & Hawkins, J., 3508, Oct. 9, Doors & windows.
 ——— J. G. & G., 1422, Apr. 19, Quilted fabrics, &c.
 Ritter, W., & Onken, G. A., 2871, Aug. 14, Planing machines.
 Roberts, A. & G., 636, Feb. 20, Pianofortes.
 ——— D., & Noble, J., 2732, Aug. 3, Furnaces.
 ——— G. & A., 636, Feb. 20, Pianofortes.
 ——— H. B., 953, Mar. 15, Railways.

Roberts, M. J., 1229, Apr. 5, Preventing cords, &c. slipping or entangling on pulleys.
 ——— M. J., 2634, July 24, Water-level indicator, &c.
 ——— M. J., 2635, July 24, Signalling in trains, &c.
 ——— M. J., 3723, Oct. 27, Driving machinery, &c.
 ——— M. J., 3835, Nov. 4, Steam-boilers.
 ——— Samuel, 4278, Dec. 9, Cast pipes, columns, &c.
 ——— Samuel & S., 1623, May 1, Driving belts and [“picking arms.”]
 ——— Samuel & S., 3257, Sep. 17, Driving straps and [“picking arms.”]
 ——— Squire & S., 1623, May 1, Driving belts and [“picking arms.”]
 ——— Squire & S., 3257, Sep. 17, Driving straps and [“picking arms.”]
 ——— T., 585, Feb. 18, Ships.
 ——— T. W., 3175, Sep. 10, Submarine tunnels.
 ——— W. A., & Tatum, A. J., 443, Feb. 5, Working sewing-machines.
 Robertson, J., 1270, Apr. 8, Water-meters.
 ——— J. B., 923, Mar. 12, Knitting machines.
 Robey, J., 2928, Aug. 20, Carbonising organic matters; [treating night soil].
 Robins, W. B., 4437, Dec. 22, Lamps.
 Robinson, A. H., 2998, Aug. 26, Skates; steering and [guiding].
 Robinson, C. E. (Clark), 338, Jan. 28, Feeding, &c. oils [in furnaces].
 Robinson, G. A., & Kendall, W. J., 588, Feb. 18, Castors.
 ——— G. A., & Swindells, J., 871, Mar. 9, Polling [booths].
 ——— G. A., & Kendall, W. J., 1628, May 3, Breaks.
 ——— G. A., & Kendall, W. J., 1728, May 10, Perambulators.
 ——— John, & Smith, J., 3442, Oct. 4, Clog blocks [and soles].
 ——— Joseph, 2798, Aug. 9, Discharging sewage.
 ——— Joy, & Settle, A., 1981, May 31, Pin or pin [winding machines].
 ——— Joy, & Settle, A., 3638, Oct. 20, Winding [machines].
 ——— R. C., 795, Mar. 4, Clay pipes.
 ——— R. E. (Gammon, Deering, & Stewart), 2281, [June 22, Reaping machines].
 ——— T., 3358, Sep. 25, Sulphates of soda and potassa.
 ——— T., & Hargreaves, J., 1576, Apr. 29, Sulphates [of soda and potassa].
 Robson, G., & Ellis, A., 803, Mar. 4, Safety-lamps.
 Roby, G., 4516, Dec. 28, Safes for gunpowder, &c.
 Rocco, De A., 1155, Mar. 31, Paper-pulp.
 Rochaz, C. A. F., 2396, July 1, Fire-arms.
 Rochford, J., 3456, Oct. 5, Spring safety-valves.
 Rochow, F., & Matthiessen, F. O. (Clark), 1810, May 14, [Hydraulic-engines, &c.].
 Rockcliffe, W., Gaine, J. S., & Dixon, F., 3313, Sep. 22, [Coating ships, &c.].
 Rodger, R. B., 2214, June 16, Ornamenting skirts, &c.
 Rodolphe, — (Bousfield), 2987, Aug. 25, Rifling fire-arms.
 Roe, C. (Patrick), 2741, Aug. 4, Belt fastener.
 Roettger, E., & Wattinne, H. (Brookes), 3836, Nov. 4, [Piled fabrics].
 Rogé, H. N., Poret, E., Baffoy, P. H., & Dupré, P. S. E. [(Clark), 288, Jan. 25, Preserving woven fabrics].
 Roger, J. H., 3106, Sep. 4, Highland cloak or cape.
 Roger-Durand, C. G., 4100, Nov. 26, Knitting machine [needles].
 Rogers, B. W., 300, Jan. 26, Screws, bolts, &c.
 ——— B. W., & Lloyd, S. Z., 2519, July 18, Screws.
 ——— G. P., & Vosper, C. W., 251, Jan. 22, Sewing-machines & stands.
 ——— H. (Mulholland), 161, Jan. 15, Cut nails.
 ——— John, 598, Feb. 18, Water-columns.

- Rogers, John B., & Anderson, S., 2755, Aug. 4, Com-
[municating between shore and vessels; saving
[life at sea, &c.]
- John E., 1594, Apr. 30, Nuts, washers, &c.
- Joseph, 3187, Sep. 11, Galvanic shield or protector.
- R. H., 963, Mar. 16, Check actions of pianos.
- Rogers, W. (Lake), 2045, June 3, Smelting ores; making
[iron; furnaces.]
- Rhode, J. C. A., 3339, Sep. 24, Stoves.
- Roland, F. (Tongue), 4478, Dec. 23, Decorticating, &c.
[fibrous materials.]
- Rolin, I. C. C., & Guitard, L. J. (Sauvée), 21, Jan. 2,
[Regulator for twisting machines.]
- Rollason, J. G., & Wood, J., 1407, Apr. 17, Fastenings
[for solitaires, &c.]
- Rollins, J. G. (Rose), 2392, July 1, Horse-rakes.
- Romanes, J., 716, Feb. 26, Roller skates.
- J., 1157, Mar. 31, Roller skates.
- Romilly, H. F. L. Worms de (Clark), 1848, May 19,
[Impelling or forcing air.]
- Rood, G. A., & Hallett, B., 630, Feb. 20, Bicycles.
- Rooke, F., 3354, Sep. 25, Electric circuits.
- Roquencourt, V. A., 2305, June 24, Artificial flowers, &c.
- Rose, G. & H. (Morgan-Brown), 4338, Dec. 15, Cleaning
[grain.]
- H. & G. (Morgan-Brown), 4338, Dec. 15, Cleaning
[grain.]
- Rose, H. J. F., 2506, July 12, Purifying middlings;
[grain separator, &c.]
- Rose, L. P. (Rollins), 2392, July 1, Horse-rakes.
- W. (Jewitt), 2277, June 22, Numerical toy.
- W. (Jewitt), 2418, July 3, Toys.
- W. (Jewitt), 3440, Oct. 4, Gas-burners.
- W. (Jewitt), 4405, Dec. 18, Slate desk.
- Roseaux, M. A. J. de la Coudes, 3202, Sep. 13, Lubricators.
- Ross, D., 4507, Dec. 27, Turnip topping & tailing machine.
- O. C. D., 197, Jan. 19, Utilizing petroleum as fuel.
- O. C. D., 1807, May 14, Distilling; separating sul-
[phur from ores.]
- J., 850, Mar. 8, Application of cements.
- Ross, J. H. (Lake), 2664, July 28, Tickets.
- J. H. (Lake), 2671, July 28, Tickets.
- Ross, W. A., 4087, Nov. 25, Stands for products and ad-
[vertisements.]
- Rotherham, A., & Anderson, M. F., 4177, Dec. 2, Dyeing
[and preparing silk, &c.]
- Rothmeyer, F., & Agnellet, J. M. (Clark), 2122, June 9,
[Pistons.]
- Rothwell, F. & T., Hough, J. E., Rimington, J. McN., &
[Shepherd, E., 350, Jan. 29, Sewing-machines.]
- F. & T., Shepherd, E., & Hough, J. E., 3268,
[Sep. 18, Shuttles.]
- T. & F., Hough, J. E., Rimington, J. McN., &
[Shepherd, E., 350, Jan. 29, Sewing-machines.]
- T. & F., Shepherd, E., & Hough, J. E., 3268,
[Sep. 18, Shuttles.]
- Rouart, S. H., & Mignon, J. B. J. (Johnson), 973,
[Mar. 16, Sugar; paper-pulp.]
- S. H., & Mignon, J. B. J. (Johnson), 2647,
[July 26, Treating sugar-cane.]
- Roucou, L. J., 4064, Nov. 23, Bronzing and preventing
[discolouring of metals.]
- Roudel, P. (Clark), 3022, Aug. 27, Measuring human
[figure; setting out patterns.]
- Rougy, H. (Dixon), 3117, Sep. 6, Injector for boilers.
- Roulier, C. M. (Johnson), 874, Mar. 9, Mats.
- Rouse, E. S., 1175, Apr. 1, Roller skates; skating.
- Rousseau, A. T., 1755, May 11, American organs.
- Rousseau, A. T. (Morgan-Brown), 3922, Nov. 11, American
[organs.]
- D. (Clark), 2657, July 27, Railway signalling.
- D. (Clark), 2740, Aug. 4, Railway signalling.
- Rousseau, D. (Clark), 4517, Dec. 28, Interlocking rail-
[road switches, &c.]
- H. (Bonneville), 3522, Oct. 11, Castors.
- Roux, P. A., 2321, June 25, Elastic fabrics.
- Rowan, T., 4331, Dec. 14, Purifying sugar.
- Rowan, W. R. (Alexander), 2154, June 12, Condensing
[steam, &c.]
- W. R. (Alexander), 2171, June 14, Steam car-
[riages.]
- Rowand, M., 939, Mar. 13, Attaching and releasing horses.
- Rowatt, T., 1162, Mar. 31, Lamps.
- Rowbottom, J., 3637, Oct. 20, Paving.
- Rowcliffe, J. B., 3054, Aug. 31, Wires used in paper-making.
- Rowe, C. T. (Tongue), 4327, Dec. 14, Clothes-horses, &c.
- Rowe, J. N., 3287, Sep. 20, Pumps.
- T., 4308, Dec. 11, Hinges for gates, &c.
- Rowland, Edward, 3101, Sep. 4, Alarm signals.
- Ellis, 94, Jan. 11, Compressing air; raising and
[forcing liquids, &c.]
- Rowley, J., 97, Jan. 11, Boot shield to prevent splashing.
- J., 2645, July 26, Splitting or cleaving wood.
- J. J., 2794, Aug. 7, Swimming apparatus.
- S. H., 649, Feb. 22, Waterclosets.
- Rowse, E., 2296, June 23, Raising, &c. carriage heads.
- Roxby, E. W., & Pearson, W., 2390, July 1, Safety-valves.
- E. W., & Walker, T., 1684, May 6, Printing.
- Roy, Leprince & Co. (Bousfield), 4272, Dec. 9, Pistons.
- Royerdela Bastie, F. B. A., 2157, June 12, Tempering glass.
- Ruck, W. D., 877, Mar. 9, Consuming smoke and saving
[fuel.]
- Rudd, T., & Knott, W., 916, Mar. 12, Ventilating mines.
- Rudkin, T., & Peacock, J. C., 590, Feb. 18, Cooking, &c.
- Rue, S. (Lake), 976, Mar. 16, Injectors for steam-gene-
[rators.]
- Rusbridge, S., & Stroudley, W., 2434, July 6, Signalling
[in trains.]
- Rushton, T. H., Dobson, B. A., & Macqueen, J., 2292,
[June 23, Combing machines.]
- Rushworth, L., Clough, H., & Baxter, H., 2714, July 31,
[Spinning.]
- Russell, H., 109, Jan. 12, Registering garments, &c.
[sent to laundries.]
- H. J. M., 2870, Aug. 14, Holder for tickets & cards.
- Russell, Jacob (Lake), 48, Jan. 5, Horse-shoes.
- Russell, James, & Dominy, G., 398, Feb. 3, Guards for forks.
- S., 1631, May 3, Fire-grates.
- W., 1445, Apr. 21, Metal furnaces.
- W. C., 2619, July 23, Log for measuring speed.
- Ruston, J., & Dunbar, J., 4480, Dec. 24, Excavating.
- Rutherford, J. H., 4551, Dec. 31, Raising sunken vessels, &c.
- J. H., & Fisher, H., 56, Jan. 6, Hot-air engines.
- Ruthven, W., 587, Feb. 18, Fire-lighters.
- Rutter, G. T., Hornsby, R., Phillips, J. E., & Innocent,
[J., 3482, Oct. 7, Reaping and mowing.]
- Ryeroff, A., & Garner, C., 4112, Nov. 26, Umbrella frames.
- Rydlill, G., 150, Jan. 14, Purifying sewage, &c.
- G., 399, Feb. 3, Purifying sewage, &c.
- Ryland, J. L., 4368, Dec. 16, Jars, bottles, &c.
- R. H., & Skewis, S., 1118, Mar. 27, Railway wheels.
- Rylands, D., 2338, June 28, Stopper or cover for bottles, &c.
- D., 3731, Oct. 27, Stoppers for bottles, jars, &c.
- T. G., & Swindells, I., 2286, June 22, Recover-
[ing products in galvanizing iron.]

S.

- Sabine, R. (Executor of Sir C. Wheatstone), 2771, Aug. 5,
[Electric telegraphy.]
- Sabunje, J. L., 1863, May 21, Printing photographs.
- Sacc, F. (Ermatinger), 3073, Sep. 1, Preserving meat, &c.

- Sachsenberg, G., & Brückner, W.* (Morgan), 3794, Nov. 1, [Reducing ores, &c.]
- Sack, A. O.* (Conradi), 1469, Apr. 22, Screw heads & nuts.
- Sagar-Musgrave, J. M., Akeroyd, J. B., & Ward, D.*, 2572, [July 19, Pump-buckets, and valves.]
- St. George, T. C. B., & Colborne, Hon. J.*, 3239, Sep. 16, [Motive-power.]
- Sainty, J.*, 708, Feb. 26, Dressing and drying corn & seeds.
- Salkeld, J., & Thomlinson, J.*, 4223, Dec. 6, Cement.
- Salmon, J., & Crosland, W.*, 581, Feb. 17, Grinding and [polishing stones.]
- Salt, E.*, 1573, Apr. 29, Paper, paper-cloth, &c.
- Salter, W.*, 1958, May 28, Haymaking machines.
- Samain, P.*, 1542, Apr. 27, Rotatory-engines.
- Sambridge, H. W.*, 2522, July 13, Lamp-shades, & globes.
- Sanders, J. H.*, 330, Jan. 28, Cartridge cases and caps.
- *R. D.*, 2425, July 5, Breaks; signalling on trains.
- Sanderson, J. G. E.*, 4523, Dec. 29, Motive-power.
- *W., & Paul, R.*, 898, Mar. 11, Glass furnaces.
- Santenaire, C.* (Mewburn), 2855, Aug. 13, Dredging ma- [chines.]
- Sarralier, A.* (Sington), 2879, Aug. 16, Steam-engine [governors.]
- Sartorius, F.* (Jensen), 882, Mar. 10, Scales and weights.
- Saul, G., & Wright, T.*, 4029, Nov. 20, Heating buildings, &c.
- *W.*, 4358, Dec. 16, Tap or bottle-cap.
- Sault, M.* (Ransom Syphon Condenser Co.), 3543, Oct. 12, [Steam-condensers.]
- Saunders, C.*, 4355, Dec. 16, Fountain pens.
- *R.*, 1015, Mar. 19, Floating breakwaters.
- Sauvadet, A.* (Clark), 2738, Aug. 3, Depilatory compo- [sition.]
- Sauvée, A.* (Rolin & Guitard), 21, Jan. 2, Regulator [for twisting machines.]
- *A. (Helson)*, 2797, Aug. 9, Treating cinders or slag.
- *A. (Faure & Kessler)*, 2897, Aug. 17, Sulphuric acid.
- *A. (Corron)*, 3757, Oct. 29, Wringing skeins of [silk, &c., and separating the threads.]
- Savage, A.*, 3496, Oct. 8, Adjustable boot last.
- *F.*, 1737, May 10, Cultivating land.
- *W. P.*, 271, Jan. 23, Preventing railway accidents.
- Savill, E.*, 1894, May 24, Skimming beer, &c.
- Saville, J.*, 1250, Apr. 6, Heating feed-water.
- Sawiczewsky, S. von, & Achtelstetter, T.* (Jensen), 3729, [Oct. 27, Preserving meat.]
- Sawyer, F. A., & Keene, G. A.* (Haseltine), 700, Feb. 25, [Surfaces for steps, &c.]
- Sawyer, J.*, 1718, May 8, Fire-lighters.
- *J.*, 2894, Aug. 17, Steam-boiler and other furnaces.
- Sawyer, W. E.* (Clark), 2351, June 28, Telegraphic circuits.
- *W. E.* (Clark), 4426, Dec. 21, Autographic tele- [graphs.]
- Saxby, F. E.*, 3326, Sep. 23, Steam and other engine valves.
- Saxon Machine Works* (Barlow), 2445, July 7, Burring [fibres.]
- Scantlebury, W., & Rath, F.*, 232, Jan. 21, Creased or [plaited fabrics.]
- Scarborough, G., & Allison, W.*, 3791, Nov. 1, Looms.
- Schaeffer, A. G., & Jameson, J.* (Tegnander), 1790, May 13, [Centrifugal pumps.]
- Schallehn, H.* (Brühs), 2442, July 6, Wire mattresses [and seats.]
- Schan, C.* (Lake), 3142, Sep. 7, Grates for furnaces, &c.
- Scheliha, V. von* (Smith), 4069, Nov. 23, Railway signals.
- Scherbaschew, A. A.* (Imray), 2271, June 22, Soda.
- Schiaffino, R.* (Johnson), 3873, Nov. 8, Propelling, &c. [ships.]
- Schildberg, H.*, 3359, Sep. 25, Portable fountains.
- Schimmel, O.*, 3191, Sep. 11, Roving and spinning frame.
- Schindler, E.* (Puskás), 1218, Apr. 3, Railway breaks.
- Schirmer, & Blau* (Steiger), 1048, Mar. 22, Producing [embroidery.]
- Schlickeysen, C.* (Jensen), 2124, June 9, Preparing clay, [peat, &c.; tile presses.]
- Schnetzler, L.* (Newton), 3156, Sep. 8, Toys.
- Schmidt, A. C.* (Gedge), 4025, Nov. 19, Envelopes.
- *E., & Kallmeyer, G.* (Jensen), 2457, July 8, [Sewing-machines.]
- *J.* (Jensen), 870, Mar. 9, Knitting machines.
- Schnabel, & Henning* (Brunner), 505, Feb. 11, Portable [cranes.]
- Schneider, R., & Kraft, F. W.* (Lake), 3196, Sep. 11, [Measuring angles.]
- Schofield, C. J.*, 511, Feb. 11, Furnaces.
- *James, & Holt, T.*, 3840, Nov. 4, Actuating [furnace grate-bars.]
- *John, Gledhill, H., & Watson, H.*, 3570, Oct. 14, [Finishing woven fabrics.]
- Scholes, F., & Cowper, P.* (Bousfield), 2482, July 9, [Rubber belting.]
- Schofield, T.*, 2578, July 20, Skip and basket gauge.
- Schönecker, C. F. A.* (Wise), 3783, Oct. 30, Boots & shoes.
- Schönheyder, W. A. G.*, 2031, June 2, Piston-rods.
- Schönlaue, P.* (Jensen), 1370, Apr. 15, Bricks.
- *P.* (Jensen), 1468, Apr. 22, Tube wells.
- Schönrock, E.*, 3086, Sep. 2, Garments for saving life at [sea, &c.]
- Schouberszky, C.*, 2646, July 26, Double bedded sofas, &c.
- Schrabetz, E.*, 3811, Nov. 3, Railway couplings.
- Schrebler, G.*, 477, Feb. 9, Pistons.
- Schreiber, F. W.*, 3246, Sep. 16, Capsuling bottles, &c.
- Schroeder, H.*, 1974, May 29, Dyeing fabrics.
- Schuchardt, C., & Broedel, E.*, 3346, Sep. 24, Locks.
- Schulte, A.* (Vollmer), 460, Feb. 6, Copying ink pencil.
- *A.* (Holliday), 498, Feb. 10, Printing fabrics.
- *A.* (Holliday), 499, Feb. 10, Bleaching fabrics.
- Schulz, J. J., & Clay, T.*, 701, Feb. 25, Warp tension me- [chanism.]
- Schüssler, C. F.*, 2000, June 1, Hydro-carbon gas apparatus.
- Schwalbe, R.* (Heinrichs), 3145, Sep. 7, Sewing straw [plait, &c.]
- Schwanck, C. F.*, 618, Feb. 20, Elastic spring hook.
- Scoffern, J., & Tidecombe, G.*, 827, Mar. 5, Paper and mill- [board.]
- *J., & Atcherley, R. J.*, 2284, June 22, Acetic acid.
- Scott, C.*, 1918, May 26, Faecal closets.
- Scott, F.* (Cranston), 677, Feb. 24, Portable lathes.
- Scott, G.*, 128, Jan. 13, Glass furnaces.
- *G.*, 4263, Dec. 8, Glass furnaces.
- *H. W.*, 3775, Oct. 30, Lawn tennis.
- *H. Y. D.*, 135, Jan. 13, Purifying gas.
- *H. Y. D.*, 373, Feb. 1, Manures.
- *H. Y. D.*, 3262, Sep. 17, Phosphates of iron and [alumina.]
- *James, & Dykes, W.*, 2030, June 2, Taps or valves.
- *James C.*, 170, Jan. 15, Moulding toothed wheels, &c.
- *James, C.*, 3204, Sep. 13, Moulding, &c. toothed wheels.
- *James, S., & De Poilly, E.*, 4068, Nov. 23, Light- [ing gas burners, &c.]
- *John (Gerard)*, 38, Jan. 4, Finishing fabrics, &c.
- *John, & Mirfield, M.*, 3903, Nov. 10, Combing fibres.
- *John P. (Haag)*, 236, Jan. 21, Heating railway [carriages.]
- *M.*, 816, Mar. 5, Cast steel ingots; rolling iron.
- *R.*, 617, Feb. 19, Fabrics made in twist lace machines.
- *R. A. E.*, 2232, June 17, Working heavy guns.
- *U.*, 4297, Dec. 11, Railway carriages, &c.
- *W. M.*, 186, Jan. 18, Fire-arms.
- *W. M.*, 1902, May 25, Fire-arms.
- *W. M.*, 3223, Sep. 15, Fire-arms.
- *W. M., & Rigby, J.*, 312, Jan. 27, Fire-arms.
- Scovell, G., & Nicholson, W.*, 2432, July 5, Looking- [glasses.]
- Scully, J., & Lloyd, J.*, 226, Jan. 20, Drying wall-papers, &c.

- Seaman, R., & Shepard, H. W. (Lake), 761, Mar. 2,
[Regulating flow of gas, &c.]
- Searle, R., 774, Mar. 3, Rails for roads, &c.
- W. & Cook, R., 2886, Aug. 16, Stamping, orna-
[menting and shaping leather, &c.]
- Seccombe, J., & Talling, R., 562, Feb. 16, Preventing
[radiation of heat.]
- Sèches, E., 2536, July 15, Defensive arms or shields.
- Sedden, J. F., & Ellis, C., 3327, Sep. 23, Dry ash-closets.
- Sellers, J. C., 112, Jan. 12, Cement.
- J. C., 2121, June 9, Building walls.
- J. C., 4266, Dec. 9, Walls and buildings.
- Selleck, W. Y. (Haseltine), 1361, Apr. 14, Harvesters.
- Sellers, J., & W. (Johnson), 4415, Dec. 20, Rotating
[puddling vessels.]
- Sellers, W., 2865, Aug. 14, Sewing-machines.
- Sellers, W., & J. (Johnson), 4415, Dec. 20, Rotating
[puddling vessels.]
- Selley, W., 3657, Oct. 21, Wringing and mangling ma-
[chine rollers.]
- Sells, C., 4244, Dec. 8, Compound marine-engines.
- Sellen, I. (Brewer), 2567, July 19, Signalling.
- Semple, D. S., 3888, Nov. 9, Collecting fares, &c.
- Serrière, J., 242, Jan. 21, Furnaces.
- Settle, A., & Robinson, J., 1981, May 31, Pin or pirn
[winding machines.]
- A., & Robinson, J., 3638, Oct. 20, Winding machines.
- Severn, G., 2435, July 6, Refrigerators.
- Sewing-Machine Co., Hamburg-American (Jensen), 26,
[Jan. 2, Printing metals.]
- Seymour, J., 1901, May 24, Signalling on railways.
- Seymour, J. M. (Lake), 3318, Sep. 22, Bale-bands.
- Sézille, A., 2471, July 9, Malt.
- Shackler, H., & Newsam, J., 1989, May 31, Thrashing.
- Shackleton, E., & Peel, J., 840, Mar. 6, Looms.
- Shakespeare, W. H., & Wood, J. W., 3772, Oct. 30, Train
[signalling.]
- Shand, G., 213, Jan. 20, Maturing spirits, wines, &c.
- Shanks, A. F., 3188, Sep. 11, Waterclosets, &c.
- F., 1507, Apr. 23, Carriages.
- H., 725, Feb. 27, Winding or spooling threads, &c.
- Shann, G., 458, Feb. 6, Steam-traps.
- Share, H. H., & Calley, S., 377, Feb. 2, Raising, &c.,
[boats.]
- Sharp, J., 4129, Nov. 29, Textile fabrics.
- Sharp, J. L. (Holmes), 2387, June 30, Gas-stoves.
- Shaw, A., 3272, Sep. 18, Garden syringes.
- B., & Netherwood, W., 1859, May 20, Bottles and
[stoppers.]
- B., Crabtree, T., & Woodhead, W., 740, Mar. 1,
[Looms.]
- C. L., 3591, Oct. 15, Lockets.
- E., 546, Feb. 15, Wheels for vehicles.
- E., 1344, Apr. 14, Wheels for winding, &c.
- G. (Kettle), 1166, Mar. 31, Paper boxes.
- James, 4346, Dec. 15, Velocipedes.
- John, 368, Feb. 1, Steam-boilers.
- John, 2173, June 14, Steam-boilers.
- John, 2570, July 19, Connecting bobbins & spindles.
- John, & Cannington, E., 3906, Nov. 10, Glass kilns.
- John W., 543, Feb. 13, Cutting off steam in engine
[cylinders.]
- Joseph W., Fulton, E., & Blake, W., 4014, Nov. 19,
[Packing cases.]
- Shaw, T. (Justice), 793, Mar. 3, Valves.
- T. (Justice), 1828, May 18, Deadening noise in
[engines; spark arresters.]
- T. (Harlow), 3430, Oct. 2, Valves.
- Shaw, T., & Blackburn, W., 3955, Nov. 13, Dry soap.
- T. W., 2169, June 14, Oil lamps.
- W., 1231, Apr. 5, Printers' type cases.
- W., & Hutchinson, W., 4399, Dec. 18, Steel.
- Shearer, A., & Williamson, D., 2716, July 31, Thinning
[turnips, &c.]
- Shears, W., 2192, June 15, Centrifugal machines.
- Shedd, J. H., & Jenks, S. A. (Lake), 3070, Sep. 1, Liquid-
[meters; pumps; motor-engines.]
- Sheffield, J., 411, Feb. 4, Glass furnaces.
- Sheldon, C. B. (Edwards), 1106, Mar. 25, Butter tubs.
- Shelley, H., & Crine, W. N., 981, Mar. 17, Umbrella tip
[fastener.]
- J. S., 1279, Apr. 8, Clipping horses, &c.
- Shepard, H. W., & Seaman, R. (Lake), 761, Mar. 2,
[Regulating flow of gas, &c.]
- Shepard, W. A. (Hosmer), 3469, Oct. 6, Fire-proof safes,
[&c.]
- Shepherd, E., Rothwell, F. & T., Hough, J. E., & Riming-
[ton, J. McN., 350, Jan. 29, Sewing-machines.]
- E., Hough, J. E., & Rothwell, F., & T., 3268,
[Sep. 18, Shuttles.]
- Sherman, J. E., & Goldsmith, G. (Morgan-Brown), 2345,
[June 28, Pumps.]
- Sheward, E. G. (Mac Lellan), 1179, Apr. 1, Screw-jacks.
- Shiers, J. J. & R., Knott, S., & Taylor, H., 2331, June 26,
[Cop-tubes, &c.]
- R. & J. J., Knott, S., & Taylor, H., 2331, June 26,
[Cop-tubes, &c.]
- Shillito, M., Speed, J. I., & Rhodes, S. G., 1432, Apr. 20,
[Finishing yarn and threads.]
- Shoe Tip Co., National Boot & (Morgan-Brown), 3895,
[Nov. 10, Shoe-tips.]
- Sholl, C., 2524, July 13, Pneumatic-hammers.
- Shone, C. G., & Walker, R., 553, Feb. 15, Communica-
[ting in trains.]
- Shorland, G. L., 1970, May 29, Warming and ventilating
[rooms, &c.]
- G. L., 2566, July 19, Fire-places, grates, &c.
- Shorrock, W., 1966, May 29, Looms.
- Short, J., Weeks, J. G., & Greig, D., 3111, Sep. 4, Air-
[compressors.]
- Shrimpton, Z., 787, Mar. 3, Crochet needles.
- Shuette, O. (Morgan-Brown), 1865, May 21, Photometers.
- Shuttleworth, J., 3160, Sep. 8, Crank-arms.
- Siddeley, J., & Mackay, F. N., 1726, May 10, Ice.
- Sieber, C. H., & Gonin, L., 3064, Sep. 1, Printing & dyeing.
- Siégris, B. M., 3232, Sep. 15, Communicating in trains.
- Siemens, C. W., 43, Jan. 5, Furnaces.
- C. W., 1551, Apr. 28, Glass furnaces.
- F., 1637, May 3, Hardening, &c. glass.
- Siggery, E. C., & Redman, T. B., 273, Jan. 23, Railway
[couplings.]
- Silber, A. M., 3046, Aug. 31, Lamps.
- Silcox, D. S. (Lake), 5, Jan. 1, Kindling fires.
- Silliman, B., & Wilcox, H. C. (Hughes), 4445, Dec. 22,
[Resonant metallic alloys.]
- C. H., & Edson, N. T. (Haseltine), 1677, May 5,
[Paddle-wheels.]
- Silva, S. A. da, 2525, July 13, Sails.
- Simmons, C., 65, Jan. 7, Steam-boilers.
- John, 2105, June 8, Rotary-engines & pumps.
- John (Carr), 3361, Sep. 25, Rail or tram
[waggons.]
- Joseph, 2428, July 5, Carrying persons, &c. into
[mid-air.]
- Joseph, & Morris, J. M., 289, Jan. 25, Purify-
[ing gas.]
- S., 1010, Mar. 18, Cleaning carpets.
- Simon, H. (Zimmermann), 2329, June 26, Measuring, &c.
[granular materials.]
- M., 1293, Apr. 9, Cleaning boots, knives, &c.
- Simonds, G. F. (Lake), 3529, Oct. 11, Tempering saws, &c.
- Simons, R. H., & Martin, A., 1555, Apr. 28, Clipping and
[shearing animals.]
- W., & Brown, A., 3488, Oct. 8, Dredgers.

- Simpson, J., 3286, Sep. 20, Paddle-wheels.
 — J. E., & Cross, C., 1834, May 18, "Indian [Kutar] cloth, &c.
 — W. (Stevenson), 1883, May 22, Applying, &c. [fuel in furnaces.
- Sinclair, J., 597, Feb. 18, Face-shields.
 — J., & Clayton, A., 629, Feb. 20, Sweeping and [rolling machines.
- Sindermann, A. (Newton), 1216, Apr. 3, Treating faecal [matters.
- Singleton, E., 2652, July 27, Consuming smoke in furnaces.
 — H., 1798, May 14, Graduated wheel tonguer.
 — T., 2176, June 14, Looms.
 — T., 4315, Dec. 13, Looms.
- Sington, A. (Sarralier), 2879, Aug. 16, Steam-engine [governors.
 — T., 57, Jan. 6, Railway signals.
- Sinibaldi, G. R. F., & Sinibaldi, P., 136, Jan. 13, Pre- [venting formation and explosion of gas.
- Sinibaldi, P., & Sinibaldi, G. R. F., 136, Jan. 13, Pre- [venting formation and explosion of gas.
- Sinkwell, G., & Tooley, E. H., 1908, May 25, Elevating [sacks, &c.
- Siprell, D. W. (Mills), 246, Jan. 22, Rock-reamers, &c.
 Skewis, S., & Ryland, R. H., 1118, Mar. 27, Railway wheels.
- Skidmore, P., 4323, Dec. 13, Roller skates,
 Skinner, C. W., Hall, W. J., & Marshall, F. A., 530, [Feb. 13, Feed-heaters for boilers.
 — T., 1030, Mar. 20, Etching on glass.
- Slater, D., 3391, Sep. 29, Covers for boats, vehicles, &c.; [curtains, shades, &c.
 — J. W., 3668, Oct. 21, Treating sewage.
 — J. W., & Rawson, C., 3703, Oct. 25, Treating sewage.
- W., Gerrard, J., & Eckersley, J., 1035, Mar. 20, [Sizing and dressing yarns.
- Sleigh, J., & Hawley, W., 2085, June 7, Carriage handles.
- Slingsby, R., 3352, Sep. 24, Photographic studios.
 — W. C., Leigh, W., & Kaye, J., 1387, Apr. 16, [Oil-cans.
- Sloan, T. J. (Lake), 1849, May 19, Wood-screws.
- Sly, G. W., 691, Feb. 25, Pumps.
- Smalley, J., & Bullough, J., 3002, Aug. 26, Stopping [motions.
- Smeeton, G. F., & Law, J., 4447, Dec. 22, Signalling in trains.
- Smellie, W., & Perkins, S., 218, Jan. 20, Furnaces.
- Smieton, D. A., 1731, May 10, Cloth for covers, bags, &c.
 — D. A., 3684, Oct. 23, Cloth for covers, bags, &c.
- Smith, A., 747, Mar. 1, Paint-brushes.
 — A., 920, Mar. 12, Opening aerated water bottles.
 — A., 968, Mar. 16, Closing aerated water bottles.
- D., & Tolson, G., 1302, Apr. 10, Extracting [vegetable matters from wool, &c.
 — Edward, 2954, Aug. 23, Catches for railway car- [riage and other doors, &c.
 — Edward, & Lewis, D., 2963, Aug. 24, Dobby for looms.
- Ephraim, 3238, Sep. 16, Bracelets, necklets, &c.
 — F. J., 2377, June 30, Flushing urinals, &c.
- Smith, F. S., & Brear, A. (Hughes), 2262, June 21, [Grate-bars.
- Smith, G. Henry, 3726, Oct. 27, Seats for tram-cars, &c.
 — G. Hilton, & M., 2035, June 2, Hose-pipes; looms.
- Henry, & Haddan, J. C., 412, Feb. 4, Carving forks.
- Henry, & Haddan, J. C., 755, Mar. 2, Joining rails.
- Henry N., 520, Feb. 12, Hot-water apparatus.
- Henry W. R., & Amos, C. F., 2006, June 1, Valve gear.
- Hermann, 4242, Dec. 8, Harmoniums, &c.
- Smith, Hiram (Leighton), 3399, Sep. 30, Wardrobes, &c.
 — Horatio M., & Lester, M. W. & F. (Cameron), [4127, Nov. 27, Furnaces.
- Smith, James, 466, Feb. 8, Mechanical stokers.
 — James, 1303, Apr. 10, Steaming fabrics.
 — James, 2212, June 16, Advertising.
- Smith, James, 4062, Nov. 23, Pleating fabrics.
 — James, & Vicars, T. & T., 529, Feb. 13, Furnaces, &c.
 — James, & Vicars, T. & T., 4443, Dec. 22, Furnaces.
- James H., 121, Jan. 13, Sewing-machines.
 — James H., 634, Feb. 20, Sewing-machines.
 — James H., 2543, July 15, Cutting and chasing bolts, [studs, &c.
- John, 1855, May 20, Deodorising blood for manure.
- Smith, John & R. (Abel), 244, Jan. 22, Steam-boilers.
- Smith, John, & Robinson, J., 3442, Oct. 4, Clog blocks [and soles.
- John, Allan, W., & Johnson, S., 3429, Oct. 2, [Marine buffers.
- John C., & Packer, T., 4306, Dec. 11, Ribs for [umbrellas, &c.
- John P., 2537, July 15, Cutting and surfacing [metal, &c.
- J. P., & Goodfellow, H., 853, Mar. 8, Tiles.
- John P., & Woodrow, P., 2561, July 17, Forging [and shaping metals.
- John P., & MacLellan, W., 3990, Nov. 17, Rail- [way chairs.
- John Y., 875, Mar. 9, Railway breaks, signalling, &c.
 — John Y., 3125, Sep. 6, Railway brakes, &c.
- Joseph N., 126, Jan. 13, Railway journal-boxes.
- Matthew & G. H., 2035, June 2, Hose-pipes; looms.
- Matthew, & M. H., 2546, July 15, Annealing and [tempering wire, &c.
- Michael H., 1892, May 24, Furnace bars.
- Michael H. & M., 2546, July 15, Annealing and [tempering wire, &c.
- P., Law, J. H., & Redfern, T., 431, Feb. 5, Paper.
- Smith, Richard & J. (Abel), 244, Jan. 22, Steam-boilers.
- Smith, Robert, 3342, Sep. 24, Doubling and winding [cotton, &c.
- Smith, Robert F., 1136, Mar. 29, Purifying sugar.
- Samuel, & Emsley, S., 2215, June 16, Drying, [&c. fibrous materials in hanks.
- Smith, Sidney, & Bates, G. A. (Hughes), 2083, June 5, [Heating air; ventilating.
- Smith, T., 1916, May 26, Planing machines.
 — T., 3042, Aug. 30, Dressing meal, middlings, &c.
 — T., 3560, Oct. 14, Planing machines.
- T. H., & Brownhill, W., 3368, Sep. 27, Rolling [metals.
- T. H., & Brownhill, W., 3577, Oct. 15, Welded iron [or other tubes.
- T. H., & Brownhill, W., 3853, Nov. 5, Metal tubes.
- T. James (Dauphinot & Martin), 1082, Mar. 24, [Spinning.
- T. James (Tessie du Motay), 2812, Aug. 10, [Bleaching fibres.
- T. James (Tessie du Motay), 3669, Oct. 22, [Bleaching wool and silk.
- T. James (Von Scheliha), 4069, Nov. 23, Railway [signals.
- T. Joseph, 1670, May 5, Fusible boiler-plugs.
- Smith, V. (Thayer), 2513, July 13, Compound for dental [plates, &c.
- Wade H., 217, Jan. 20, Metals and alloys.
- Smith, Walter, 450, Feb. 6, Blowing glass.
- Walter P., 819, Mar. 5, Interlocking signals and [points.
- William, 2078, June 5, Packing for lubricating.
- William, 2839, Aug. 12, Sash fasteners.
- William, & Pieri, P., 342, Jan. 29, Bidon and [drinking bottle.
- William, Summerscales, J., & Marks, D., 2155, [June 12, Washing, wringing, and mangling.
- William F., 2358, June 29, Shaping the heads of [bolts, &c.
- William F., & Coventry, A., 4047, Nov. 22, Lathes.

- Smith, William J., & Berry, W. S., 2327, June 26, Dyeing.
 — Willoughby, 4384, Dec. 17, Joining telegraph wires.
 Smyth, S. R., 3353, Sep. 24, Iron, steel, &c.
 — W. W., & Hunt, G. G., 2334, June 26, Gas engines.
 Smythe, E., & Birley, S., 2988, Aug. 26, Producing loco-
 [motion in vehicles.
 Smythe, E. T. (Haseltine), 422, Feb. 4, Balanced slide-
 [valves.
 Smythies, J. K., 4151, Dec. 1, Flying machine.
 Snell, H. S., 695, Feb. 25, Drying fabrics.
 — H. S., 1262, Apr. 7, Waterclosets, urinals, &c.
 — J., 3061, Aug. 31, Turning the leaves of music.
 Snelling, G. F., 1844, May 19, Treating blood, &c. for
 [manure.
 Snelus, G. J., 500, Feb. 10, Extracting metallic com-
 [pounds, &c.
 Snow, B. F., Gregory, W., Maglone, J., & Hathaway,
 [W. A. (Lake), 4456, Dec. 22, Journal-box bearings.
 Snowden, T., 3555, Oct. 13, Furnaces and their fittings.
 Snushall, E., & Topham, W., 1821, May 15, Metallic covers.
 Solet, F., & Mathian, V. (Abel), 1545, Apr. 27, Heating
 [air, &c.
 Soley, G. T. (Collinson), 3260, Sep. 17, Covers or lids.
 Solvay, E. (Wise), 820, Mar. 5, Washing gas, &c.; dis-
 [tilling liquids.
 — E. (Wise), 2775, Aug. 5, Ammonia.
 Somerset, J., & Hayes, I. R., 1020, Mar. 19, Lubricating
 [axles, &c.
 — J., & Hayes, I. R., 1021, Mar. 19, Railway chairs.
 Somerville, J., 3551, Oct. 13, Cleaning, &c. boots & shoes.
 Sommerfeldt, E. J., & Nissen, C. (Morgan-Brown), 2149,
 [June 11, Writing, &c. secret dispatches.
 Sonnenthal, G. (Mueller), 1394, Apr. 16, Locking doors.
 Sonstadt, E., 1638, May 3, Sulphuric anhydride.
 Soper, C., 2777, Aug. 6, Boots and shoes.
 Sorby, T. C., 3324, Sep. 23, Window fastener.
 Soubeur, A., 4499, Dec. 24, Wheels for vehicles.
 — A., 4500, Dec. 24, Lamps.
 Soul, M. A. (Ascough), 2962, Aug. 24, Combined bevel,
 [square, &c., and tool holder.
 Souter, W., 1744, May 11, Dressing frames for waste
 [silk, &c.
 Southall, C. H., 1411, Apr. 17, Brushing and polishing
 [boots.
 Southby, A. G., 1210, Apr. 3, Gas-stoves.
 — A. G., 1211, Apr. 3, Supplying stoves with gas.
 Souther, J., & Chapman, O. S. (Mills), 1688, May 6,
 [Excavating.
 Southwood, W., 2140, June 10, Date & month indicators.
 — W., 3439, Oct. 4, Cut nails.
 Sparrow, T. D. T., 4135, Nov. 29, Trousers.
 Spartali, N. D., 3180, Sep. 10, Screw-propellers.
 — N. D., 3251, Sep. 17, Steam-engines.
 Speed, J. I., Rhodes, S. G., & Shillito, M., 1432, Apr. 20,
 [Finishing yarn and threads.
 Speight, G., 2681, July 28, Labels for luggage, &c.
 Speir, R., & Mather, J., 622, Feb. 20, Gas.
 Spence, F. M. & P., 1704, May 7, Treating substances
 [of alumina, &c. for products.
 — F. M. & P., 1961, May 28, Treating ferric and
 [aluminous matters.
 — H. G., 427, Feb. 4, Fitting pipes, &c. to ships.
 — J. B., 3628, Oct. 19, Phosphates of soda & potash.
 — J. B., 3629, Oct. 19, Manure.
 — P., 1455, Apr. 21, Manure.
 — P. & F. M., 1704, May 7, Treating substances
 [of alumina, &c. for products.
 — P. & F. M., 1961, May 28, Treating ferric and
 [aluminous matters.
 — W. (Zalewski), 2104, June 8, Thrashing machines.
 — W. (Walker), 2526, July 14, Sewing-machine
 [shuttles.
 Spence, W. (Lefebvre, Desurmont, & Lefebvre), 3164,
 [Sep 9, Varnish, oils, &c.
 — W. (Widdifield), 4050, Nov. 22, Breaks for rail-
 [ways, &c.
 Spencer, C. L., Hail, N. B., Bicknell, E. J., & Westcott,
 [N. W. (Lake), 3000, Aug. 26, Knitting.
 Spencer, C. M., 893, Mar. 10, Screws.
 — G., 2062, June 4, Bearing springs.
 — J., 3912, Nov. 11, Hansom cabs.
 — S., & Gillman, A. W., 234, Jan. 21, Bottling, &c.
 [beer.
 — S., & Gillman, A. W., 2702, July 30, Bottling
 [beer, &c.
 — T., 1368, Apr. 15, Purifying water.
 — W. H., 3205, Sep. 13, Gas.
 Speyer, M., 305, Jan. 27, Portable sheds or tents.
 Spikes, J. A. L., 2658, July 28, High-pressure valves.
 Spill, D., 1296, Apr. 9, Lathes for turning buttons, &c.
 — D., 1739, May 11, Xyloidine compounds.
 Spiller, A. F., 952, Mar. 15, Roller skates.
 — A. F., & Clark, G., 3966, Nov. 15, Bituminous
 [compounds.
 Spivey, W., & Kirk, G., 2569, July 19, Loom temples.
 Spratt, G. O., Anderson, Sir J., & Bull, E., 2844, Aug. 12,
 [Electric-telegraphs.
 Spurin, R. C. (Thowless), 3695, Oct. 25, Spools.
 Spurrier, W. J., 1516, Apr. 24, Warming & ventilating.
 Squier, G. L. (Lake), 3929, Nov. 11, Hauling, &c., grain
 [or seed.
 Squire, W. S., 3278, Sep. 18, Oil of vitriol.
 Stableford, W., 1098, Mar. 25, Railway wheels.
 Stacy, G. (Morgan-Brown), 4483, Dec. 24, Gear tackle
 [for lifting, &c.
 Stafford, T., & Hilton, R. L., 2538, July 15, Setting out
 [carpentry and joiners' work.
 — T., Jackson, S., Kay, R. P., & Dearnley, N.,
 [4410, Dec. 20, Weaving.
 Stake, J., & Whitehead, H. W., 2221, June 16, Combing
 [machines.
 Stalkart, G. H., 2631, July 24, Motive-power.
 Standfield, J., & Clark, J. L., 514, Feb. 11, Floating docks
 [and pontoons.
 Stanhope, Hon. L. E., 1827, May 18, Cricket-bats.
 Staniland, J. T., 134, Jan. 13, Perambulator brakes.
 Stanley, H. F., 3907, Nov. 10, Cooling and refrigerating.
 — W., & Hale, W. J., 1749, May 11, Letter-boxes, &c.
 — W. F., 4130, Nov. 29, Clocks.
 Stannah, J., 3748, Oct. 28, Safety apparatus for hoists.
 Stark, W., 370, Feb. 1, Breadthening and drying fabrics.
 — W. (Herzen), 3080, Sep. 2, Treating skins & hides.
 Staub, Conrad, & Co. (Clark), 1281, Apr. 8, Patterns
 [for garments.
 Stead, C. W., & Walsh, J., 3571, Oct. 14, Papering piece
 [goods, &c.
 — H., & Briggs, G., 1537, Apr. 27, Singeing woven
 [fabrics and yarns.
 — H., & Appleyard, B., 2033, June 2, Steaming fabrics.
 — J. F., & Littlewood, J., 2636, July 24, Looms.
 Stearn, C. H., 1399, Apr. 16, Detecting counterfeit coin.
 Steel, J., 333, Jan. 28, Actuating railway brakes.
 — J., 623, Feb. 20, Braking and signalling in trains, &c.
 — J., 1763, May 11, Brake-block.
 — J., 2721, Aug. 2, Railway breaks; compressing air.
 — J., 2930, Aug. 20, Drawing retorts.
 — J., 4401, Dec. 18, Charging and drawing retorts.
 — J. & R., 3837, Nov. 4, Morticing machines.
 — R. & J., 3837, Nov. 4, Morticing machines.
 Steele, E., 4359, Dec. 16, Pitch chains.
 — J., & Cocks, F., 3735, Oct. 28, Sewing-machines.
 Steers, R., 1326, Apr. 12, Screw heads and drivers.
 Steiger, J. (Schirmer & Blau), 1048, Mar. 22, Producing
 [embroidery.

- Steinbach, A., & Co. (Beck), 394, Feb. 3, Saddle-girths.
 — A. & Co. (Beck), 2723, Aug. 2, Saddle-girths.
 Steiner, I., 1419, Apr. 19, Blood manure.
 Steinfelser, F. W. D., 1328, Apr. 12, Concertinas, organs, &c.
 Steinmetz, U. G. (Lake), 975, Mar. 16, Umbrellas.
 Stenberg, O., 3159, Sep. 8, Caloric-engines.
 Stephens, J., 2872, Aug. 14, Ventilating, heating, &c.,
 [washing air gases, and churning].
 Stephens, W. A., & Moller, W. (Newton), 1482, Apr. 22,
 [Blast-furnaces].
 Sternberg, M., 3688, Oct. 63, Cheques.
 Sterne, L., 83, Jan. 9, Railway couplings.
 — L., 1090, Mar. 25, Railway couplings.
 — L., 4075, Nov. 24, Screw-nuts.
 — L., & Pullman, A. B., 1180, Apr. 1, Railway draw
 [and buffer apparatus].
 Stevens, B. F. (Atwater), 2090, June 7, Compositions for
 [cutting, grinding, &c].
 — B. F. (Gilchreest), 2978, Aug. 25, Ladders.
 — E., 1612, May 1, Coupling break-rods.
 Stevens, E. M. (Morgan-Brown), 4077, Nov. 24, Loom
 [shuttles; spindles].
 Stevens, J., & Hallas, C. G., 4276, Dec. 9, Rolling steel
 [for cutlery, &c].
 — J. S., 1314, Apr. 10, Garden engines.
 Stevens, P. (Murdoch), 3172, Sep. 10, Mitrailleur.
 Stevens, T., 2829, Aug. 11, Purifying liquids and sewage.
 Stevenson, G., 387, Feb. 3, Mining; steam-engines, &c.
 Stevenson, G. K. (Simpson), 1883, May 22, Applying,
 [&c. fuel in furnaces].
 Stevenson, J. C., 1723, May 8, Alkaline sulphates.
 — R., 2285, June 22, Weaving; shuttles.
 Stewart, Gamson, & Deering, (Robinson), 2281, June 22,
 [Reaping machines].
 Stewart, C., 3309, Sep. 22, Signalling in trains.
 — J., 4535, Dec. 30, Securing nuts on bolts & studs.
 Stidolph, G. F. & T. F., & Catchpole, J. L., 612, Feb. 19,
 [Cleaning seed].
 — T. F. & G. F., & Catchpole, J. L., 612, Feb. 19,
 [Cleaning seed].
 Stiff, W. C. (Leng), 3843, Nov. 4, Stop-valves.
 Stirling, J., & Peacock, T., 1224, Apr. 5, Utilising waste
 [heat].
 — J., & Peacock, T., 3436, Oct. 2, Utilising waste
 [heat].
 Stobwasser, C. H., & Co. (Timme), 3749, Oct. 28, Raising
 [and lowering chandeliers, &c].
 — G. (Tongue), 1342, Apr. 13, Lamp burners.
 Stock, E., & Buckley, J. B., 378, Feb. 3, Stench-traps.
 Stockley, J., 358, Jan. 30, Preventing priming in boilers.
 Stockman, B. P., 255, Jan. 22, Electric signalling.
 Stockwell, J. A., 1441, Apr. 20, Life-boats.
 Stoker, F. W., 847, Mar. 8, Mechanical puddlers.
 Stokes, E. P., 143, Jan. 14, Boat-lowering apparatus.
 — R., & Goff, R., 254, Jan. 22, Busk fastenings, &c.
 — W. H., 446, Feb. 5, Breaks for carriages, &c.
 — W. H., 610, Feb. 19, Signalling on trains.
 — W. H., 1258, Apr. 7, Working breaks.
 Stone, J., 3705, Oct. 26, Admitting air to furnaces.
 — R., 2222, June 16, Gimp looms.
 — R. C., 2695, July 30, Railway buffers.
 — T. C., 4452, Dec. 22, Kilns or ovens.
 Stoneham, J. T., 3755, Oct. 29, Connecting driving
 [straps, &c].
 — J. T., 4558, Dec. 31, Buttons, and fixing same.
 — J. T., & Turner, J. A., 1673, May 5, Packing
 [material].
 Stoney, E. W., 1201, Apr. 2, Excavating.
 — J. R., & Rhodes, B. & T. B., 941, Mar. 13, Re-
 [ducing flocks, mungo, &c].
 — J. R., & Rhodes, B. & T. B., 1511, Apr. 24,
 [Washing, &c. fabrics].
 Stoops, N. D., & Cushman, C. S. (Lake), 3208, Sep. 13,
 [Sewing-machines].
 Storer, A., 3656, Oct. 21, Doubling, twisting and reeling.
 — J. (Cooper), 693, Feb. 25, Waterclosets.
 Storey, I. & J. H., 3918, Nov. 11, Self-closing taps.
 — J. H. & I., 3918, Nov. 11, Self-closing taps.
 Stormont, J. G., 1, Jan. 1, Call-bell and actions.
 Stott, S. E., & Kilson, R. (Lake), 4429, Dec. 21, Cotton
 [openers].
 Strachan, J., 3609, Oct. 14, Weaving.
 Stratton, J. F. (Barlow), 407, Feb. 3, Indicating water-
 [level, &c].
 — J. F. (Barlow), 1528, Apr. 26, Heating feed-water.
 Stringfellow, H. W., 25, Jan. 2, Drain-pipes.
 Stroudley, W., 1678, May 5, Fastening tyres on wheels.
 — W., 2086, June 7, Indicating speed of engines,
 [&c].
 — W., & Rusbridge, S., 2434, July 6, Signalling
 [in trains].
 Stryker, P. J. (Wilson), 3495, Oct. 8, Excavating ma-
 [chines].
 — P. J. (Clark), 3988, Nov. 17, Excavating ma-
 [chines].
 Stuart, C., 442, Feb. 5, Stop-valves and taps.
 — C., 537, Feb. 13, Safety-valves for boilers.
 Stubbs, G., & Palmer, F. R., 4152, Dec. 1, Hat and bonnet
 [shapes].
 — J., & Corrigan, J., 1717, May 8, Winding threads, &c.
 — J., Glover, J., & Richards, S., 2136, June 10,
 [Doubling and winding yarn].
 Studwell, H. A. (Buchanan), 628, Feb. 20, Economising
 [fuel, &c. in steam-boilers].
 Stuttle, W., 1197, Apr. 2, Gas-brackets.
 Suckling, N. J., 3494, Oct. 8, Steam-generators.
 Sueur, C. le, 8116, Sep. 6, Safety or floating vest.
 Sugden, Z., & Hartley, J., 3511, Oct. 9, Boilers for heating
 [water].
 Sugg, W. T., 786, Mar. 3, Lamp-burners.
 — W. T., 2842, Aug. 12, Storing and supplying gas.
 — W. T., 3334, Sep. 24, Testing lighting power of gas.
 — W. T., 4428, Dec. 21, Station and test gas-meters.
 — W. T. (Arson), 4427, Dec. 21, Maintaining water-
 [level in gas-meters].
 Sulzbach, C. W. (Lake), 1049, Mar. 22, Preventing
 [steam-boiler explosions].
 Sulzer, A. & H., & Ernst, J. R. (Johnson), 3170, Sep. 9,
 [Motive-power engines].
 — H. & A., & Ernst, J. R. (Johnson), 3170, Sep. 9,
 [Motive-power engines].
 Summers, J., 1340, Apr. 13, Nails or spikes.
 Summerscales, J., Marks, D., & Smith, W., 2155, June 12,
 [Washing, wringing, and mangling].
 Sutcliffe, T., & Fewings, J., 1598, Apr. 30, Bottles and
 [stoppers].
 — T., & Fewings, J., 3751, Oct. 28, Bottles and
 [stoppers].
 Sutherland, J., Munn, A., & Rennie, J., 419, Feb. 4,
 [Sinking cylinders for foundations].
 — K. T., 4344, Dec. 15, Brush handles.
 — W. S., & Howard, H., 2304, June 24, Weld-
 [ing tubes].
 Suto, H. (Haseltine), 1479, Apr. 22, Device for holding
 [thread, &c].
 Sutton, J. (Moody), 2753, Aug. 4, Cinder-sifters.
 Swain, J., & Chamberlain, W., 4290, Dec. 10, Horse-
 [shoes, &c].
 Swanhäuser, G. (Wirth), 1236, Apr. 6, Copying pencils.
 Swann, J. (Ellis), 1063, Mar. 23, Gas-burners.
 Swarbrick, R., 491, Feb. 10, Fire-proof flooring.
 Sweeney, P. (Wise), 3179, Sep. 10, Purifying gas.
 Sweet, T. W., & Hodgson, J. R., 1478, Apr. 22, Life-
 [buoys, boats, &c].

Swift, W., 1524, Apr. 26, Railway wheel tyres.
 Swinarski, E. von, 1151, Mar. 30, Potato drills.
 Swinburn, J. F., 3635, Oct. 20, Fire-arms.
 Swindells, I., & Rylands, T. G., 2286, June 22, Recover-
 [ing products in galvanizing ores.
 — J., & Robinson, G. A., 871, Mar. 9, Polling
 [booths.
 Syers, J. M., & Ellerbeck, J. H. T., 4326, Dec. 14, Motive-
 [power.
 Sykes, B. C., 2554, July 16, Heating water.
 — E. T., 1596, Apr. 30, Feeding carding-engines.
 — E. W., J. & J. E., 1107, Mar. 25, Spinning fibres.
 — J. J. E. & E. W., 1107, Mar. 25, Spinning fibres.
 — J. E., E. W. & J., 1107, Mar. 25, Spinning fibres.
 — W. J., 2926, Aug. 19, Discharging and recovering
 [oil, &c.
 — W. R., 662, Feb. 23, Railway signals.
 Sylvester, J., & Bridgett, W., 2571, July 19, Lace-making.
 Symons, G. J., 3293, Sep. 20, Magnetic compasses.
 Syphon Condenser Co., Ransom (Sault), 3543, Oct. 12,
 [Steam-condensers.

T.

Taaffe, R. P. B. (Pettitt), 1026, Mar. 19, Roller skates.
 Taft, O. W. (Clark), 1153, Mar. 30, Table cutlery; handles.
 Talbot, F., & Hatchard, S., 1095, Mar. 25, Hearses & biers.
 — F. J., 2568, July 19, Railway couplings.
 Talcott, S. C., (Lake), 2661, July 27, Measuring cloth, &c.
 Talling, R., & Field, F., 1938, May 27, Insulating compounds.
 — R., & Seecombe, J., 562, Feb. 16, Preventing
 [radiation of heat.
 Tallis, C., & Cave, E., 788, Mar. 3, Bottles; closing
 [same, &c.
 Tallon, E., & Derigny, E., 717, Feb. 26, Boot nails, &c.
 Tamet, D. (Mouries), 3081, Sep. 2, Preserving bread.
 Tanner, B., 279, Jan. 25, Treating ores and minerals.
 Tarrant, J. H., 3722, Oct. 27, Preventing smoky chimneys,
 [and ventilating.
 Tasker, W. (Cook, Cook, Nichols, & Magerison), 1043,
 [Mar. 22, Bobbin-winder.
 Tatz, R. (Johnson), 742, Mar. 1, Medical capsules.
 Tatham, H., 3003, Aug. 26, Latch needles.
 Tattersall, J., 4325, Dec. 13, Carding fibres.
 Tattersfield, J. W., 3889, Nov. 9, Finishing woven fabrics.
 Tatum, A. J., & Roberts, W. A., 443, Feb. 5, Driving
 [sewing-machines.
 Taunton, R. H., Hayward, G., & Knap, C., 208, Jan. 19,
 [Wrought iron tubes.
 Tavernier, L. F., & Matheson, J. P., 361, Jan. 30,
 [Felted fabrics.
 Taylor, De W. C., & Kimball, R. J. (Clark), 3625, Oct. 19,
 [Water-meters.
 Taylor, E., 1747, May 11, Heater for economising fuel, &c.
 — E., 3892, Nov. 10, Heater for economising fuel, &c.
 — E., 4396, Dec. 18, Stoves.
 Taylor, E. D., & Weatherhogg, G. W., 2278, June 22,
 [Steam-engines.
 Taylor, E. O., 848, Mar. 8, Looms.
 — F. B., 892, Mar. 10, Steam-engine & fluid motor.
 Taylor, G. E. (Johnson), 2022, June 2, Tinned plates.
 Taylor, G. N. (Taylor), 192, Jan. 18, Lamps.
 — H., Shiers, R. & J. J., & Knott, S., 2331, June 26,
 [Cop-tubes, &c.
 — H. A., & Muirhead, A., 684, Feb. 24, Telegraphs.
 — H. C., 1921, May 26, Cornice pole & other rings.

Taylor, James, 607, Feb. 19, Furnaces.
 — James, 3562, Oct. 14, Tightening driving bands, &c.
 Taylor, James P., (Mills), 3472, Oct. 6, Battery guns.
 Taylor, John, 2802, Aug. 9, Dry-earth and water-closets.
 — R., 321, Jan. 28, Tapping screw-threads.
 Taylor, R. N. (Taylor), 192, Jan. 18, Lamps.
 Taylor, T. L., 3816, Nov. 3, Press for burnishing, &c.
 — W., 1156, Mar. 31, Sewing-machines.
 — W. H., 1590, Apr. 30, Trimming for skirts, &c.
 — W. W., & Anthony, E., 1127, Mar. 27, Printing.
 — W. W., & Anthony, E., 3056, Aug. 31, Printing.
 Tebbs, J., 692, Feb. 25, Packing hops.
 Tebbutt, J. L., & Wade, A., 3363, Sep. 25, Bricks, tiles, &c.
 Tee, H., 3024, Aug. 27, Indicating apparatus for public
 [conveyances, &c.
 Tegnander, C. (Jameson & Schaeffer), 1790, May 13,
 [Centrifugal pumps.
 Telfer, J., & Dow, D., 3089, Sep. 3, Chlorine.
 — J., & Dow, D., 3153, Sep. 8, Oxide of manganese,
 [nitrates, &c.
 Tellier, A. A. F. le, & Verstraet, L. D. (Johnson), 3483,
 [Oct. 7, Printing fabrics.
 Tellier, A. le, 4061, Nov. 22, Purifying, &c. water; treating
 [sewage.
 Temple, T., 391, Feb. 3, Railway breaks.
 — T., 3302, Sep. 21, Railway couplings.
 Tenac, C. L. van (Lake), 4206, Dec. 4, Pocket fire and
 [light producer.
 Tench, J., 3308, Sep. 21, Tuning keys for pianos, &c.
 Tenwick, J., 3090, Sep. 3, Malleable cast iron.
 Terrell, T., 519, Feb. 12, Tin-plates.
 — T., & Thomas, J., 644, Feb. 22, Tin & terne plates.
 Terrey, C. A., 3322, Sep. 23, Rock-drills.
 Terry, J., & Atha, J. R., 3986, Nov. 16, Teaching the
 [pianoforte, &c.
 Tessié du Motay, C. M. (Abel), 1305, Apr. 10, Treating
 [wild silks for dyeing, &c.
 — C. M. (Smith), 2812, Aug. 10, Bleaching
 [fibres.
 — C. M. (Smith), 3669, Oct. 22, Bleaching
 [wool and silk.
 Teychenné, J., 1337, Apr. 13, Disinfecting.
 Teyssonniere, A. (Kleinan), 3946, Nov. 12, Adhesive seals.
 Thacker, H., 2642, July 24, Printing, &c. metal plates.
 — H. (Martyn), 3017, Aug. 27, Sheet metal
 [boxes, &c.
 Thackrah, W., 608, Feb. 19, Bronzing textile fabrics.
 Thackray, E., 4471, Dec. 23, Preparing, gilling, and draw-
 [ing boxes.
 Thackthwaite, W., 1984, May 31, Roller skates.
 Thallon, J., & Thornton, J., 3632, Oct. 20, Inlaying, &c.
 [wood.
 Thayer, L. O., 454, Feb. 6, Fire-arms.
 — L. O. (Smith), 2513, July 13, Compound for
 [dental plates, &c.
 Theiler, M. & R., 3976, Nov. 16, Electric-telegraphs.
 — R. & M., 3976, Nov. 16, Electric-telegraphs.
 — R., & Higgins, F., 423, Feb. 4, "Tell-tale" clocks.
 Thellusson, E., 2066, June 4, Vehicles for land or water.
 Thierry-Meig, C. (Clark), 1587, Apr. 29, Fixing, &c.
 [colors on fabrics.
 Thiery, C. L., 2367, June 29, Watch-cases, &c.
 Thom, E. J., 2446, July 7, Filling bottles, &c.
 Thomas, A. W. (Lake), 671, Feb. 23, Bustles and pads.
 — A. W. (Lake), 2899, Aug. 17, Bustles & pads.
 Thomas, C., 3182, Sep. 10, Raising sunken vessels, &c.
 — J., & Terrell, T., 644, Feb. 22, Tin & terne-plates.
 — J. D., & Darlington, J., 2302, June 24, Valves.
 — W., 4269, Dec. 9, Stays and corsets.
 Thomlinson, J., & Salkeld, J., 4223, Dec. 6, Cement.
 Thompson, E., 180, Jan. 16, Rafts and ships' boats.
 — H. 3528, Oct. 11, Preserving meats, &c.

- Thompson, H. G. (Tongue), 3291, Sep. 20, Stitching [books, &c.]*
Thompson, I. C., & Chibborn, F., 3963, Nov. 13, Filtering.
 ——— Jacob B. & Lodelle, W. W., 3533, Oct. 12, [Making lime, &c.]
 ——— James, 4080, Nov. 24, Horizontal compound [engine.]
 ——— John, 4328, Dec. 14, Mashing malt or grain.
Thompson, John J. (Lake), 1896, May 24, Sewing-machines.
Thompson, N., 756, Mar. 2, Stoppers for bottles, &c.
 ——— N., 1869, May 21, Stoppers for bottles, &c.
 ——— N., 2217, June 16, Stoppers for bottles, &c.
 ——— N., 2415, July 3, Stoppers for bottles, &c.
 ——— N., 3996, Nov. 17, Rack pulleys.
 ——— R., 2533, July 14, Washing and wringing [machines.]
 ——— R. W., & Lampitt, C., 2933, Aug. 20, Dressing [flour, &c.]
Thompson, S. R. & Nowell, T. S. (Hunt), 4235, Dec. 7, [Grinding and "rossing" bark.]
Thompson, W., 3654, Oct. 21, Oil-cake presses.
 ——— W. B., 3932, Nov. 12, Windlasses.
 ——— W. P. (Leuchtenrath), 4098, Nov. 25, Preserving [ing food, &c.]
 ——— W. P. (Cazin), 4246, Dec. 8, Lock-nuts, bolts, &c.
 ——— W. P., & Cooke, B., 2196, June 15, Break- [waters, piers, buildings, &c.]
 ——— W. P., & Thwaites, J. B., 4003, Nov. 18, [Fasteners like nails or screws.]
 ——— W. P., Griffiths, T., & Guion, —, 2402, July 2, [Zinc sulphide.]
 ——— W. P., Griffiths, T., & Guion, —, 2460, July 8, [Metallic sulphides and sulphates.]
Thomson, B. L., 1373, Apr. 15, Preserving ships, &c.
 ——— B. L., & Connolly, T., 3138, Sep. 7, Protecting [ships, &c.]
 ——— D., 4522, Dec. 29, Raising, tipping, &c. trucks.
 ——— E. H., & Clark, J. L., 2864, Aug. 13, Record- [ing passengers in vehicles.]
 ——— J., & Haworth, W., 3937, Nov. 12, Weaving [bags, &c.]
Thomson, T. (Lake), 2349, June 28, Rowlocks for boats.
Thomson, T., & Young, R., 1509, Apr. 24, Planing or [shaping stone, &c.]
 ——— W., 603, Feb. 19, Printing machines.
 ——— W. & Harpham, W. & T. C., 3177, Sep. 10, [Hides & skins.]
 ——— W. S. (Chapin), 2451, July 7, Spinning.
Thorneloe, G., 4083, Nov. 24, Valves.
Thornley, G., & Buxton, T., 188, Jan. 18, Cask staves.
 ——— G., & Buxton, T., 1518, Apr. 26, Cask staves.
Thornton, James, & Thallon, J., 3632, Oct. 20, Inlaying, [&c. wood.]
 ——— John, 1076, Mar. 24, Dressing flour.
 ——— R. S., & Bates, E., 2612, July 22, Nails.
Thornycroft, J. I., 3305, Sep. 21, Pumping machinery.
Thorp, T., & Bell, A. P., 3303, Sep. 21, Lighting gas.
Thorpe, J., & Hunstone, W. H., 1070, Mar. 24, Artificial [leather cloth.]
Thowless, O. (Spurin), 3695, Oct. 25, Spools.
Thudichum, J. L. W., 4121, Nov. 27, Treating wine.
Thwaites, J. B., & Thompson, W. P., 4003, Nov. 18, [Fasteners like nails or screws.]
Tice, W., 2275, June 22, Weaving and spinning machinery.
Tickle, R. P., 3493, Oct. 8, Locking pages in chases for [printing.]
Tidcombe, G., & Scoffern, J., 827, Mar. 5, Paper and [millboard.]
Tideman, B. J. (Wilson), 1796, May 14, Floating docks.
Tiffany, J. (Gilbee), 1556, Apr. 28, Railway carriage shoes.
Tildesley, M., 8, Jan. 1, Door bolts.
Tilghman, R. A. (Gilbee), 4080, Nov. 20, Producing [designs by sound blast.]
Till, H. S., 4038, Nov. 20, Making earthenware plates, &c.
Tilley, W., 635, Feb. 20, Photography.
Tillyer, W. J., 3813, Nov. 3, Boats for applying on removal [of tape.]
Tilp, E., 2259, June 21, Reducing vibration of locomotives, &c.
Timme, H. F. O. (Stobwasser & Co.), 3749, Oct. 23, [Raising and lowering chandeliers, &c.]
Timmis, I. A. (Godley), 3325, Sep. 23, Carriage springs.
 ——— I. A. & Granville, A., 643, Feb. 22, Treating hides.
Timmer, A. F. W. (Wirth), 1377, Apr. 15, Fire-arms.
Titley, T., 2658, July 27, Pressing bricks, &c.
Titterton, F., & Cariyon, P., 2464, July 8, Tube expand- [ing tools.]
Todd, A., 4172, Dec. 2, Roller skates.
 ——— L. J., 355, Jan. 30, Locomotive carriages, &c.
Toiray, C. G., 4291, Dec. 10, Bottle cases for marking [linen.]
Tolson, G., & Smith, D., 1302, Apr. 10, Extracting [vegetable matter from wool, &c.]
Tombs, E., 2333, June 26, Preparing leather.
Tomey, J., 943, Mar. 13, Water-gauge glasses.
Tomkins, A. S., 114, Jan. 12, Cooking stoves.
 ——— E. F., 3129, Sep. 7, Games.
Tomlinson, E., 2931, Aug. 20, Fire-lighters.
 ——— J., 401, Feb. 3, Preparing fibres.
Tomlinson, O. (North), 130, Jan. 13, Axle-boxes.
Tonge, J., & Miles, G. E., 2384, June 30, Drawing beer, &c. [from casks.]
Tongue, J. G. (Gannat), 1170, Mar. 31, Alimentary sub- [stances.]
 ——— J. G. (Stobwasser), 1342, Apr. 13, Lamp burners.
 ——— J. G. (Cummings), 1476, Apr. 22, Screws and [screw-drivers.]
 ——— J. G. (Montaugé & Brandely), 1477, Apr. 22, [Corks or stoppers.]
 ——— J. G. (Zegut), 1978, May 31, Moulding cores, &c.
 ——— J. G., (Chauveau), 2961, Aug. 23, Rotary en- [gines.]
 ——— J. G., (Jolissaint-Vonèche & la Société Comte & Mabut), 3290, Sep. 20, Vegetable leather.
 ——— J. G. (Thompson), 3291, Sep. 20, Stitching books, [&c.]
 ——— J. G. (Rider), 3404, Sep. 30, Air-engines.
 ——— J. G. (De Forest), 4081, Nov. 24, Setting car- [riage springs.]
 ——— J. G. (Rowe), 4327, Dec. 14, Clothes-horses, &c.
 ——— J. G. (Roland), 4478, Dec. 23, Decorticating, &c. [fibrous materials.]
Tooley, E. H., & Sinkwell, G., 1908, May 25, Elevating [sacks, &c.]
Toop, R. (Toope), 2050, June 3, Furnace bars.
Toope, C. (Toop), 2050, June 3, Furnace bars.
Topham, W., & Snushall, E., 1821, May 15, Metallic covers.
Topp, A. & N., & Nicholson, E., 283, Jan. 25, Carding- [engines.]
 ——— N. & A., & Nicholson, E., 283, Jan. 25, Carding- [engines.]
Toppan, D. L., Chapin, G. B., & Meloan, D. C. & H. H. [(Haseltine), 1009, Mar. 18, Wood-planing.]
Toppin, P., & Longsdon, D., 176, Jan. 16, Horse-shoes.
Torlotin, E. (Barlow), 3015, Aug. 27, Size for yarns, &c.
Torr, C. W., & Atkins, J., 594, Feb. 18, Gasaliers, &c.; [gas-brackets.]
Touaillon, C. (Bollée), 3521, Oct. 11, Steam carriage.
Tough, J., 4496, Dec. 24, Railway and tramway wheels.
Tournier, F. A. (Imray), 212, Jan. 20, Masticating, [&c. food.]
Toussaint, J., 2840, Aug. 12, Moulds or cores for pipes, &c.
 ——— J., 2937, Aug. 20, Mould cores for pipes, &c.

Towell, M., & Gibson, H., 905, Mar. 11, Stocks and dies.
 Tower, B., Deverell, W. T., & Deverell, S. R., 308, Jan. 27,
 [Motive-power.
 — B., Deverell, W. T., & Deverell, S. R., 2890, Aug. 17,
 [Motive-power.
 Townsend, J., 1862, May 21, Phosphorus and phosphides.
 — J., 4162, Dec. 2, Chromates.
 Trabuc, W., 661, Feb. 23, Needles.
 Train, E. H., & Reeves, G. P. (Haddan), 4375, Dec. 17,
 [Lace or cord fasteners.
 Tranter, W., 3171, Sep. 10, Guns and pistols.
 Travis, C. L., 1606, Apr. 30, Binding grain.
 — W., 1071, Mar. 24, Self-acting mules.
 Trentanove, M., & Verdie, J., 1355, Apr. 14, Stopping trains.
 Trick, W., Davis, D., Daniel, E. F., & Phillips, T. D., 3909,
 [Nov. 10, Iron.
 Trier, F., 1659, May 4, Stereotype moulds.
 Trossin, O., 1700, May 7, Preventing escape of steam in
 [steam-engines.
 Trotman, S., 715, Feb. 26, Generating, &c. gaseous vapour.
 Trottier, E., 488, Feb. 10, Tin and terne-plates.
 Trudeau, T. (Lake), 2819, Aug. 11, Gas-burners.
 True, C. J., 4165, Dec. 2, Combining saccharine liquids
 [with gases.
 Truefitt, H. P., 3915, Nov. 11, Tooth-brushes.
 Tubbs, G., 2515, July 13, Self-acting latches.
 — H., 3960, Nov. 13, Roller skates.
 Tucker, B. W., 4508, Dec. 27, Dredging buckets & links.
 — E., & Wallace, J. S., 890, Mar. 10, Protecting
 [houses, &c. from fire.
 — J. B., 1734, May 10, Mounting papers on zinc, &c.
 Tucker, S. D. (Conquest), 3105, Sep. 4, Cutting and fold-
 [ing paper, &c.
 — T. M., & Lowerre, A. H. (Johnson), 85, Jan. 9,
 [Goffering, &c.
 Tuddenham, S., & Nunn, J., 4473, Dec. 23, Skates.
 Tully, W., & Creasy, J. T., 1692, May 6, Motive-power.
 — W., Monckton, E. H. C., & Creasy, J. T., 3396,
 [Sep. 29, Motive-power.
 Turnbull, J. A., & Blair, R., 4277, Dec. 9, Sugar.
 Turner, A., 154, Jan. 14, Elastic fabrics.
 — A., 3476, Oct. 6, Boots.
 — A. D., 1268, Apr. 8, Sewing-machines & needles.
 — A. D., 1929, May 26, Cutting toothed gearing.
 — A. D., 3222, Sep. 15, Boxes and cases for sewing-
 [machines, &c.
 — A. W., 3847, Nov. 4, Washing machines.
 — C., 426, Feb. 4, Coupling broken shafts.
 — C., & Page, H., 778, Mar. 3, Removing hair
 [from hides, &c.
 — C. H., 545, Feb. 15, Curing smoky chimneys.
 — C. H., & Jeyes, J., 205, Jan. 19, Lubricator.
 — C. H., & Wilson, M., 2166, June 12, Bed cover-
 [ing and rug.
 — F. T., 4212, Dec. 6, Adjusting hoes.
 — H., 3279, Sep. 18, Steam-engines.
 — James, 1263, Apr. 7, Signalling in & stopping trains.
 Turner, James (Lake), 2046, June 3, Treating, &c. nox-
 [ious gases.
 Turner, James, & Hughes, S., 392, Feb. 3, Lamp burners.
 — James A., & Stoneham, J. T., 1673, May 5, Packing
 [material.
 — John, R. & S., 3267, Sep. 18, Securing pipe-joints,
 — Josiah, 1339, Apr. 13, Velocipedes.
 — R. S. & J., 3267, Sep. 18, Securing pipe-joints.
 — R. B., 3507, Oct. 9, Sewing-machine needles.
 — S., J. & R., 3267, Sep. 18, Securing pipe-joints.
 — W., 4232, Dec. 7, Combined traction-engine and
 [steam-plough.
 Turnock, James, 1530, Apr. 26, Cooling liquids.
 — Joseph, 51, Jan. 5, Steam-engines.
 — Joseph R., 3344, Sep. 24, Converting motion.

Turquand, W. M. G., 2233, June 17, Shearing sheep.
 Turton, G., 4310, Dec. 11, Buffer draw-bar and coupling.
 Tweeddale, James, 2597, July 21, Delivering liquids from
 [hose.
 — John, 3392, Sep. 29, Dressing, &c. stone.
 Twibill, J., 3728, Oct. 27, Steam-boilers, &c.
 Twist, J., 2337, June 26, Sifting, washing, &c.
 Tyer, E., 449, Feb. 6, Galvanic batteries.
 — E., 3103, Sep. 4, Communicating in trains.
 — E., 3608, Oct. 18, Signal pulls.
 Tylor, A., 1857, May 20, Controlling, &c. flow of liquids.
 — H., & Martin, W. R., 2255, June 19, Bedsteads.
 — L., 2749, Aug. 4, Spinning and doubling.
 Tzssen, A. Daniel-, 3718, Oct. 27, Two-wheeled skates.

U.

Underwood, G. H., 4208, Dec. 6, Indigo for dyeing, &c.
 Unger, J. C. (Bonneville), 1854, May 20, Propelling ships.
 Unsworth, T., 2341, June 28, Winding doubling frames.
 Urch, W. H., & Bain, L., 3602, Oct. 16, Checking receipt
 [of money, &c.
 Ure, A., 456, Feb. 6, Smelting ores.
 Urquhart, J., & Andrews, W. W., 3857, Nov. 5, Gas-meters.
 Usher, A. A., 3500, Oct. 8, Dress improvers.

V.

Vacherot, A., 3828, Nov. 3, Rotary-engines, pumps, &c.
 Vaile, R., 2470, July 9, Rotary-engine.
 Vaillant, J. E. (Henderson), 1654, May 4, Motive-power.
 Valette, L. A., 2373, June 30, Turning music leaves.
 Vall, T. de, 2991, Aug. 26, Churns.
 Vallet, L., 490, Feb. 10, Bottle-stoppers.
 — L., 3734, Oct. 27, Stoppering bottles.
 Vallon, G. C. J. de Jacobi du, & West, H. J., 2239,
 [June 18, Skating rinks.
 Valpy, H., & Burrell, P., 275, Jan. 25, Railway car-
 [riages; tires.
 Van Baerle, V. (Wirth), 1382, Apr. 15, Bleaching
 [fabrics, &c.
 Van der Elst, C. L. (Johnson), 2584, July 20, Steam-
 [engines.
 — C. L. (Johnson), 2718, July 31, Dredging
 [machines.
 Van de Velde, E. J., 4407, Dec. 20, Cigar holders.
 Van Dyk, H., 3212, Sep. 14, Reticules, &c.
 Van Gelder, P., 732, Feb. 27, Removing smut from grain.
 Van Gülpen, Lensing, & Von Gimborn (Brewer), 2817,
 [Aug. 11, Caloric motor.
 Van Haagen, C. (Johnson), 47, Jan. 5, Sharpening drills.
 — C. (Johnson), 912, Mar. 11, Grinding and
 [sharpening.
 Van Tenac, C. L. (Lake), 4206, Dec. 4, Pocket fire and
 [light producer.
 Varley, C. F., 303, Jan. 27, Repairing propeller shafts, &c.
 — F. H., 276, Jan. 25, Coupling propeller shafts, &c.
 — F. H., 1635, May 3, Forming metal discs, &c.
 Vaughan, E. P. H. (Blot), 37, Jan. 4, Presses.
 — E. P. H. (Maynard), 1003, Mar. 18, Applying
 [oil painting to walls, &c.
 — E. P. H. (Brière), 1004, Mar. 18, Feeding-bottles.
 — E. P. H. (Goncer), 1993, June 1, Letter envelope.
 — E. P. H. (Hostelart), 2391, July 1, Preserving
 [fibrous tissues.
 — E. P. H. (Neech), 3341, Sep. 24, Gauges.

- Vaughan, E. R., 3538, Oct. 12, Bottles and stoppers.
 — E. R., 4466, Dec. 23, Pumps for aerated water.
 Velde, E. J. van de, 4407, Dec. 20, Cigar holders.
 Velge, G., 1924, May 26, Removing phosphorus from
 [ores; refining slag.
 Vera, P., 175, Jan. 16, Gas or hot-air engines.
 Verdie, J., & Trentanove, M., 1355, Apr. 14, Stopping trains.
 Verdié, J. A. F. (Newton), 3771, Oct. 29, Heating fur-
 [naces, &c.
 Verdier, F. R. (Morgan-Brown), 654, Feb. 23, Treating
 [peat.
 Vere, C. E. Hope, 183, Jan. 18, Cleansing china articles, &c.
 Versmann, F., 1038, Mar. 20, Colouring matters.
 Verstraet, L. D., & Le Tellier, A. A. F. (Johnson), 3483,
 [Oct. 7, Printing fabrics.
 Vicars, T. & T., & Smith, J., 529, Feb. 13, Furnaces, &c.
 — T. & T., & Smith, J., 4443, Dec. 22, Furnaces.
 Vickers, E. C., & Freestone, A., 3925, Nov. 11, Boots,
 [shoes, &c.
 — M., & Malcolm, S., 4215, Dec. 6, Motive-power.
 Vidal, E. (Jensen), 3815, Sep. 22, Navigating the air.
 Vidard, J. B. (De Pass), 2916, Aug. 18, Railway car-
 [riages and cars; lighting vessels.
 Viéville, S. F., 2281, June 17, Embroidering machines.
 Viglino, J., & Donna, J. (Morgan-Brown), 626, Feb. 20,
 [Motive-power.
 — J., & Donna, J. (Morgan-Brown), 729, Feb. 27,
 [Railway wheels.
 Vigné, W. (Weatherdon), 107, Jan. 12, Disinfectant.
 Vintras, L. A., 2877, Aug. 14, Railway carriages.
 Virtue, F., 4042, Nov. 20, Trimming, &c. linseed cake.
 Vispé, J. L., & Nisbeth, A. F. H. (Brunius), 1666, May 5,
 [Signalling on railways.
 Vivian, J., & Blackburn, J., 891, Mar. 10, Hoists.
 Vogt, C. L. (Johnson), 2690, July 29, Sulphuric acid.
 Vollmer, H. (Schulte), 460, Feb. 6, Copying ink pencils.
 Von Auer, W., & Coombs, R. T. (Clark), 2092, June 7,
 [Ships' berths, &c.
 Von Dreyse, F. (Newton), 4198, Dec. 4, Fire-arms.
 Vonèche, A. G. Jolissaint, & la Société Comte & Mabut
 [(Tongue), 3290, Sep. 20, Vegetable leather.
 Von Faber, J. L., 178, Jan. 16, Pencils.
 Von Gimborn, Van Gülpen, & Lensing (Brewer), 2817,
 [Aug. 11, Caloric motor.
 Von Grubinski, F., 2650, July 26, Reaping and mowing.
 Von Sawiczewsky, S., & Achtelester, T. (Jensen), 3729,
 [Oct. 27, Preserving meat.
 Von Schelha, V. (Smith), 4069, Nov. 23, Railway signals.
 Von Swinarski, E., 1151, Mar. 30, Potato-drills.
 Von Wojewodsky, L., 1416, Apr. 19, Transit of wheel
 [carriages on roads.
 — L., 2527, July 14, Lighting cigars, &c.
 — L., 4424, Dec. 21, Facilitating transit
 [of wheeled carriages.
 Vosper, C. W., & Rogers, G. P., 251, Jan. 22, Sewing-
 [machines and stands.
 Voysey, R. W. Okes-, Balfour, A. J., Hamilton, J. B., &
 [Wade, G. E., 1585, Apr. 29, Musical instruments.
 — R. W. Okes-, Hamilton, J. B., & Wade, G. E.,
 [2029, June 2, Musical instruments.
- W.**
- Wackett, J., 68, Jan. 7, Slaughtering animals.
 Wade, A., & Tebbutt, J. L., 3363, Sep. 25, Bricks, tiles, &c.
 — B., 1057, Mar. 23, Tobacco-pipes.
 — B., 1474, Apr. 22, Pipe-case, tobacco-stopper, &c.
- Wade, G. E., Okes-Voysey, R. W., Balfour, A. J., &
 [Hamilton, J. B., 1585, Apr. 29, Musical instruments.
 — G. E., Okes-Voysey, R. W., & Hamilton, J. B.,
 [2029, June 2, Musical instruments.
 Wadsworth, James, & Edmondson, J., 657, Feb. 23, Nails.
 — James E., 3993, Nov. 17, Spinning.
 — John, 418, Feb. 4, Bottle-stoppers.
 — W., 1443, Apr. 21, Ladders for venetian blinds.
 Wainwright, H., & Gill, J. & W., 3296, Sep. 21, Lubri-
 [cating spindles.
 — J. J., 1245, Apr. 6, Watchman's detector.
 — S., Keats, J., & Greenwood, A., 3123, Sep. 6,
 [Sewing thread and cords.
 Waithman, A., 1691, May 6, Twine or cord.
 — A., 3109, Sep. 4, Twine or cord.
 Wakefield, J., 1282, Apr. 9, Slide-valves.
 — W., 3607, Oct. 18, Gathering, &c. hay and corn.
 Walbank, J., & Bradley, J., 389, Feb. 3, Spinning fibres.
 Walcker, W., 1521, Apr. 26, Desk-table.
 Walduck, H. J., 3733, Oct. 27, Two-wheeled vehicles.
 Walker, A., 1939, May 27, Suspending, &c. ships' cabins.
 — A. B., 1886, May 22, Breweries and distilleries.
 — A. B., 1887, May 22, Casks and other vessels.
 — B., & Pfau, J. F. A., 719, Feb. 26, Hydraulic
 [machinery.
 — B. P., & Holmes, J. M., 4039, Nov. 30, Feeding
 [fuel to furnaces, &c.
 — B. P., Hainge, H. J., & Davison, R., 2656, July 27,
 [Pavements, roads, &c.
 — C. B., 2556, July 16, Sinking cylinders and wells.
 — E., 4322, Dec. 13, Windlasses.
 — E. (Paucksch), 1099, Mar. 25, Steam-boilers.
 — E., & Whettem, W. H., 667, Feb. 23, Propelling
 [ships.
 — G. A., 2279, June 22, Reaping machines.
 — H., 3709, Oct. 26, Fire-arms.
 Walker, H. L. (Spence), 2526, July 14, Sewing-machine
 [shuttles.
 Walker, H. M. (Estienne), 3810, Nov. 2, Bush for boiler
 [tubes and plates.
 — J., & Pickford, G., 3741, Oct. 28, Lubricating
 [spindles.
 Walker, P. (Clark), 4525, Dec. 29, Tube stopper.
 Walker, Richard, & Shone, C. G., 553, Feb. 15, Communi-
 [cating in trains.
 — Robert (De Berque), 2100, June 8, Burning
 [hydrocarbons in furnaces, &c.
 — Robert (De Berque), 4241, Dec. 7, Burning
 [hydro-carbons in furnaces, &c. and for smelting.
 — Robert S., 733, Feb. 27, Steam-boilers.
 — S., Gibson, J., & Howitt, T., 103, Jan. 12, Stop-
 [pering bottles, &c.
 — T., 762, Mar. 2, Fastener for cravats, &c.
 — T., & Roxby, E. W., 1684, May 6, Printing.
 — W., 1319, Apr. 12, Axle bearings for mining
 [wagons.
 — W., 1657, May 4, Rock drilling machinery.
 — W., & Garforth, W. E., 884, Mar. 10, Expansion
 [gear.
 — W. T., 1058, Mar. 23, Centre valves.
 — W. T., 4477, Dec. 23, Gas-scrubbers.
 — W. T. (Drory), 3398, Sep. 30, Gas-testing cock.
 Walkington, W., 541, Feb. 13, Wheel or roller skates.
 — W., 1799, May 14, Deodoriser for closets.
 Wallace, J., 1816, May 15, Pumping water, air, &c.
 — J. S., & Tucker, E., 890, Mar. 10, Protecting
 [houses, &c., from fire.
 Waller, G., 184, Jan. 18, Gas.
 — T., 3732, Oct. 27, Heating buildings.
 Wallis, T., 1671, May 3, Lace.
 Wallwork, T. F., 3100, Sep. 4, Carding cotton.
 Walmsley, S. B., 2641, July 24, Combing machines.

- Walsh, J., & Jones, W., 1864, May 21, Soda and potash.
 — J., & Stead, C. W., 3571, Oct. 14, Papering piece
 [goods, &c.]
 Walton, J. T., 1388, Apr. 16, Screw-bolts, nuts, &c.
 — T., 299, Jan. 26, Locks.
 Wanzer, R. M. (Gardner), 1102, Mar. 25, Sewing-machines.
 Wappenstein, R., 1597, Apr. 30, Registers for tram-
 [cars, &c.]
 Ward, A., 1079, Mar. 24, Sash fasteners.
 — D., Sagar-Musgrave, J. M., & Akeroyd, J. B.,
 [2572, July 19, Pump buckets and valves.
 — F. D., 3770, Oct. 29, Paper for cheques, bills, &c.
 — H., J. & W., 2455, July 8, Brick-making.
 — John, W. & H., 2455, July 8, Brick-making.
 — John C., 3856, Nov. 5, Musical instruments.
 — Joseph, 1133, Mar. 29, Engine fireplaces & boilers.
 — S., & Loewenstein, D., 78, Jan. 8, Doubling, &c.
 [threads; stop-motion.
 — T., 3617, Oct. 19, Railway breaks and signals.
 — W., J. & H., 2455, July 8, Brick-making.
 — W. M., 1167, Mar. 31, Mills or crushers.
 Wardale, J. D., & Carrick, H., 3458, Oct. 5, Revolving
 [furnaces.
 Warden, H. W., 3924, Nov. 11, Igniting, &c. gas-lamps.
 — W. M., Muirhead, J., & Clark, J. L., 2707,
 [July 30, Galvanic-batteries.
 Warner, H., 947, Mar. 13, Clip fastenings for books.
 — W. J., 2610, July 22, Charging, &c. gas-retorts.
 Warran, J., & Ellis, T. A., 1794, May 14, Ore stampers.
 Warren, F. P., 1438, Apr. 20, Boots and shoes.
 — F. P., 2859, Aug. 13, Coffins.
 — F. P., Brodie, W., Wilson, M., & McLay, J. C. S.,
 [76, Jan. 8, Railway wheels and axles.
 Warrington, T. A., & Harwood, C., 3802, Nov. 2, Cutting
 [cork, &c.]
 — T. A., & Harwood, C., 4422, Dec. 21, Valve
 [for cleaning bottles, &c.]
 Warschawsky, J., & Zysel, F., 347, Jan. 29, Pressing
 [or ironing.
 Warwick, J., 710, Feb. 26, Sewing-machines.
 — T., 3569, Oct. 14, Umbrella runners & notches.
 Waterwork Association, German (Wirth), 2884, Aug. 16,
 [Water-meters.
 Watkins, D., & Harrington, J., 759, Mar. 2, Roller skates.
 — J., 4448, Dec. 22, Skates.
 Watson, H., 4271, Dec. 9, Strainer for paper-making.
 — H., Schofield, J., & Gledhill, H., 3570, Oct. 14,
 [Finishing woven fabrics.
 — J., 857, Mar. 8, Sewing-machines.
 — J., & Hilliard, J. B., 1557, Apr. 28, Skates.
 — M., & Anderson, J., 962, Mar. 16, Self-locking box.
 — R., & Booth, H., 1716, May 8, Utilising parts of
 [healds.
 Watt, F., 1552, Apr. 28, Music portfolios.
 Wattine, H., & Roeltger, E. (Brookes), 3836, Nov. 4,
 [Piled fabrics.
 Watts, J. W., 896, Mar. 10, Ships' bunk & life-preserver.
 Waugh, James, 15, Jan. 1, Closing and opening bottles.
 — James, 1041, Mar. 22, Filling, closing, &c. bottles.
 — James, 2808, Aug. 10, Charging & closing bottles.
 — John, 2699, July 30, Dating, &c. tickets.
 Wavish, J., 39, Jan. 4, Fire-places.
 — J., 4106, Nov. 26, Heating, ventilating, and dis-
 [infecting.
 Wawn, M., & Willcox, F. W., 2340, June 28, Ventilator, &c.
 Way, J. T., 686, Feb. 24, Soluble phosphates of lime.
 — J. T., 3876, Nov. 8, Fabrics; soap and detergents.
 Weare, R., 252, Jan. 22, Extinguishing fire in ships, &c.
 — R., & Isherwood, S., 326, Jan. 28, Carbonaceous
 [material for filtering, &c.]
 Weatherby, C. P. N., 351, Jan. 29, Ice; cooling build-
 [ings, &c.]
 Weatherby, C. P. N. (Mason), 1660, May 4, Seats and
 [backs for chairs, &c.]
 Weatherdon, B. F. (Vigné), 107, Jan. 12, Disinfectant.
 Weatherhogg, G. W., & Taylor, E. D., 2278, June 22, Steam-
 [engines.
 Webb, C. J., 1768, May 12, Woven fabrics; looms.
 — F. W., 462, Feb. 6, Railway points and signals.
 Webb, H. & J. M., & Marshall, W. C. (Newton), 3947,
 [Nov. 12, Preserving meats.
 Webb, J., & Leach, R., 257, Jan. 22, Embroidering.
 Webb, J. M. & H., & Marshall, W. C. (Newton), 3947,
 [Nov. 12, Preserving meats.
 Weber, C. P., & Portait, E. P. E. (Clark), 28, Jan. 2,
 [Preparing fibres for spinning.
 Webster, J., 4434, Dec. 22, Clinical thermometers.
 — L., 459, Feb. 6, Milling or fulling fabrics.
 — L., 2256, June 19, Fulling, milling, felting, &c.
 — W., 4146, Nov. 30, Sewing-machines.
 — W., Bodel, L. G., & Masse, J., 1559, Apr. 28,
 [Carriages, tricycles, &c.]
 Wedekind, H. (Witthöfft), 2941, Aug. 20, Steel.
 — H. (Bülowius), 3084, Sep. 2, Furnaces.
 Weeks, J. G., Greig, D., & Short, J., 3111, Sep. 4, Air-
 [compressors.
 Wegener, C. (Jensen), 1421, Apr. 19, Nuts for tapping.
 Weigel, A., 3320, Sep. 23, Colouring matters.
 Weild, E., & Whalley, E., 3014, Aug. 27, Doubling,
 [twisting, &c.]
 Weiler, F. N. (Degener), 4560, Dec. 31, Mixing soap, &c.
 Weill, L., & Harburg, H. (Grosclaude), 528, Feb. 12,
 [Musical-boxes, &c.]
 Weintraud, Franz (Joyce), 3866, Nov. 6, Fastenings for
 [purses, &c.]
 Weintraud, Frederick, & Joyce, R. J. S., 2450, July 7,
 [Buttons.
 Weir, James G., 1871, May 21, Sewing-machines.
 — John, G., & Morgan, A. C., 3321, Sep. 23, Railway
 [signals.
 Weiss, V. (Hughes), 2480, July 9, Washing wool.
 Welch, E. J. C., 1778, May 13, Adjusting drilling ma-
 [chine spindles, &c.]
 Weldhen, A. (Barnes), 2008, June 1, Furniture.
 Weldon, C. J., 77, Jan. 8, Clasps or buckles.
 Wells, J. L. (Hunt), 4153, Dec. 1, Printing on glass.
 Wells, P. (Johnson), 1754, May 11, Bolts, spikes, &c.
 — W., & Withers, H. H., 3025, Aug. 27, Reaping
 [machine binders.
 Welton, T., 3727, Oct. 27, Magneto-therapeutics.
 Wennuckers, J. (Lake), 3501, Oct. 8, Motor for omni-
 [buses, &c.]
 Wernekinck, E., 4521, Dec. 29, Fluid motor.
 Wertheim, J. (Wirth), 637, Feb. 20, Ship furnitures.
 — J. (Johnson), 1462, Apr. 21, Steam-boilers.
 West, H. J., & Jacobi Du Vallon, G. C. J. de, 2239,
 [June 18, Skating rinks.
 — J., 2346, June 28, Discharging gas retorts.
 West, J. I. (Newton), 1456, Apr. 21, Embroidering and
 [braiding.
 West, J. J., 1965, May 28, Gas stoves.
 — J. W., 845, Mar. 6, Spooling machines.
 — M. E., 2511, July 12, Operating sewing machines, &c.
 — T. J., 2011, June 2, Printing surfaces.
 — Walter, 1401, Apr. 17, Compressing, storing, and
 [utilising air, &c.]
 — William, 1287, Apr. 9, Glove and dress fastenings.
 Westcott, C. S., 2965, Aug. 24, Composing type.
 Westcott, N. W., Spencer, C. L., Hail, N. B., & Bicknall,
 [E. J. (Lake), 3000, Aug. 26, Knitting.
 Westerby, J., & Broadbent, T., 231, Jan. 21, Valves.
 Westinghouse, G., 2405, July 3, Brake; signalling in trains.
 Westinghouse, G. (King), 569, Feb. 17, Motive-power
 [engines.]

- Westlake, L., 1283, Apr. 9, Roller skates.
 Westman, H., 2691, July 29, Wooden structures.
 Westmorland, J., 2562, July 17, Ventilating buildings.
 Weston, F., 3301, Sep. 21, Coal gas.
 Westwood, J., & Baillie, R., 341, Jan. 29, Iron plates.
 Wetton, C. E., 859, Jan. 30, Boots and shoes.
 — C. E., 2729, Aug. 3, Magnetic appliances.
 Wetzlar, *frères* (Clark), 2350, June 28, Pipes for smoking.
 Weyde, H. V., 1266, Apr. 7, Photographic studio windows.
 Weyhe, W., 3019, Aug. 27, Motor; blowing engines and
 [pumps].
 — W., 4298, Dec. 11, Motor fluid engines, &c.
 Whalley, E., & Weild, E., 3014, Aug. 27, Doubling,
 [twisting, &c].
 Wheatstone, Sir C., 2771, Aug. 5, Electric telegraphy.
 Wheeler, E. G. (*Coughlin*), 4054, Nov. 22, Ice; refrige-
 [rating, &c].
 — J., 4022, Nov. 19, Holding & displaying shirts.
 — S., & Jerome, E., 1080, Mar. 24, Paper boxes, &c.
 — W. F., 1592, Apr. 30, Device for holding
 [fertilizers, &c].
 Whettem, W. H., & Walker, E., 667, Feb. 23, Propelling
 [ships].
 Whipple, H. O. (Ladd), 621, Feb. 20, Healds for looms.
 — L. W. (Johnson), 2623, July 23, Wadding
 [felted fabrics, &c].
 Whitaker, James, & Burlison, R., 3512, Oct. 9, Tenting
 [and drying].
 — John, 2676, July 28, Chaff-cutters, &c.
 — John M., & Bywater, W., 4216, Dec. 6, Weaving.
 — John W., 3220, Sep. 15, Charging gas retorts.
 Whitburn, T., 605, Feb. 19, Printing designs, &c. on wood.
 White, C., & Copp, W. L., 1948, May 27, Gas.
 — J., 746, Mar. 1, Chromates of potash and soda.
 White, J. A. (Clark), 4526, Dec. 29, Trap and grating
 [for drains].
 White, W., 2473, July 9, Gas.
 — W., 3838, Nov. 4, Gas.
 — W., 4495, Dec. 24, Sulphides of lead, zinc, &c.
 — W. G., 3690, Oct. 25, Safes & strong-room doors.
 Whitehead, H. W., 1991, May 31, Combing machines.
 — H. W., & Stake, J., 2221, June 16, Combing
 [machines].
 — H. W., & Wright, F. H., 3844, Nov. 4,
 [Washing fibres].
 — T., & Best, I., 1480, Apr. 22, Combing machines.
 — W. E., 4539, Dec. 30, Opening, cleaning, &c.
 [fibres].
 — W. H., 1826, May 18, Pneumatic breaks.
 Whitehouse, W., 596, Feb. 18, Sustaining artificial teeth.
 Whitehurst, S., & Boden, H., 3092, Sep. 3, Stopping
 [carriages on rail or tramways].
 Whitelaw, A., 641, Feb. 22, Lock for tip carts.
 Whiteley, J., 2981, Aug. 25, Lace fabrics.
 Whiteman, W. T., 1129, Mar. 27, Date indicators, &c.
 Whitford, G. B., 4046, Nov. 22, Folding seats.
 Whitham, T., & Witham, J., 3441, Oct. 4, Carding
 [engines].
 Whiting, H. G., 3345, Sep. 24, Medical appliances.
 Whitley, B., 3942, Nov. 12, Shaping, &c. screw-nuts, and
 [sockets].
 — J., 1672, May 5, Removing, &c. sewer gases.
 — J., 1694, May 6, Purifying gas.
 Whitney, E. (Hughes), 1472, Apr. 22, Fire-arms.
 Whittaker, J., 992, Mar. 18, Forging blank nuts, bolts, &c.
 — R., 1852, May 19, Keyless barrel watches.
 — T., & Poole, W., 2280, June 22, Fire-lighters.
 — T., Duxbury, J., & Clayton, J., 73, Jan. 8,
 [Bricks, tiles, &c].
 Whittard, C., 4090, Nov. 25, Roads and footways.
 Whittlemore, A. (Lake), 163, Jan. 15, Spikes.
 Whithread, W., 2398, July 2, Mono-calcic phosphate.
- Whittingham, J., 1820, May 15, Dressing millstones.
 Whittle, J., 2617, July 23, Railway and colliery rope
 [couplings].
 Whitwham, F. G. (*Bonnefin*), 1195, Apr. 2, Treating ex-
 [creta].
 Whitworth, Sir J., 2096, June 7, Ordnance.
 Whyte, A., 4251, Dec. 8, Artists' easel and seat.
 — A. C., 487, Feb. 10, Saving life from shipwreck.
 — G., 3131, Sep. 7, Signalling in trains.
 — James, & Aitchison, A., 3680, Oct. 23, Gas.
 — John, 784, Mar. 3, Looms.
 Wickersham, W. (Haseltine), 3444, Oct. 4, Nail machines.
 Wicks, J. F. (Benson), 1139, Mar. 30, Looms.
 — J. F. (Benson), 1199, Apr. 2, Pattern chains for
 [looms].
 — J. F. (Benson), 3537, Oct. 12, Doubling & twisting.
 Wicksteed, J. H., & Buckton, J., 2039, June 3, Multiple
 [drills, &c].
 Widdifield, W. P. (Spence), 4050, Nov. 22, Brakes for
 [railways, &c].
 Wier, M. A., 504, Feb. 11, Measuring flow of liquids.
 — M. A., 806, Mar. 4, Igniting gas.
 — M. A., 1668, May 5, Speed indicators.
 — S. B., 3534, Oct. 12, Speed indicators.
 Wiese, G. L. (Neuhans), 2517, July 13, Signalling at sea
 [and on land].
 Wigg, C., & Kennedy, J., 314, Jan. 27, Furnaces.
 Wiggins, J. H., & Carvell, S. L. T. (*Clouser*), 1975,
 [May 29, Amalgamating machines].
 Wigham, J. R., 356, Jan. 30, Fog and other signals.
 — J. R., 3854, Nov. 5, Fog and other signals.
 Wileke, H., 4, Jan. 1, Propelling screw steam-ships.
 Wilcox, H. C., & Silliman, B. (Hughes), 4445, Dec. 22,
 [Resonant metallic alloys].
 Wilcox, M., 406, Feb. 3, Combined seal and watch key.
 Wild, E., 2531, July 14, Regulator for bottling beer trays.
 — S., 4209, Dec. 6, Carding cotton waste.
 Wilde, H., 4515, Dec. 28, Metal rollers; refining copper.
 Wilders, J. M., 1448, Apr. 21, Guard for thrashing machines.
 — J. M., 2696, July 30, Gathering corn, crops, &c.
 Wildsmith, J. H. S., 4103, Nov. 26, Collecting and treat-
 [ing excreta, &c].
 Wiles, J. F., 2210, June 16, Lock or jam-nuts.
 Wilkin, F., & Denef, J. (Lake), 843, Mar. 6, Beds or
 [couches].
 Wilkins, J., 2012, June 2, Lubricating composition.
 Wilkinson, A., 60, Jan. 6, Compounds for paving, fuel, &c.
 — A., 4267, Dec. 9, Material for roads, build-
 [ings, &c].
 — F., 3032, Aug. 28, Stop-motions.
 — H. M. (*Joly*), 4484, Dec. 24, Ink.
 — J., & Clayton, R., 1141, Mar. 30, Bottle stoppers.
 — J. F., 380, Feb. 2, Motive-power.
 — R. W., 2682, July 29, Presses for plate printing;
 [cleaning plates].
 Wilks, A., 2781, Aug. 6, Locks.
 — D., 1972, May 29, Treating refuse and sewage
 [for manure, &c].
 Willans, J. G., 157, Jan. 14, Furnaces.
 — J. G., 3197, Sep. 13, Iron and steel.
 — J. G. (*Willans*), 1897, May 24, Refrigerating, &c.
 — T. B., 4108, Nov. 26, Finishing fabrics.
 Willans, T. J. (Willans), 1897, May 24, Refrigerating, &c.
 Wilcox, F. W., & Wawn, M., 2340, June 28, Ventilator, &c.
 Williams, A., 2993, Aug. 26, Optical instruments.
 — C., 1915, May 26, Annealing pot.
 — D., Matthews, T. W., Leather, T. P. & Richards,
 [J., 935, Mar. 13, Tin-plate].
 — H., & Evans, P., 22, Jan. 2, Stoppering bottles.
 Williams, H. A. (Clark), 3231, Sep. 15, Rolling crimping
 [tacks, &c].
 — I. F. (Benson), 437, Feb. 5, Boots and lasts.

- Williams, J., 1247, Apr. 6, Fire-arms.
 Williams, J. S. (Lake), 2751, Aug. 4, Anchors.
 Williams, O., 2116, June 9, Blinds, shades, &c.
 — R. P., 2938, Aug. 20, Railway crossings.
 — W., 3199, Sep. 13, Laying and joining pipes [and tubes].
 — W., 3812, Nov. 3, Penholders.
 — W. H., 2041, June 3, Mixing beverages, &c.
 Williamson, C., 82, Jan. 9, Stays and corsets.
 — C., 1490, Apr. 23, Funeral carriage.
 — D., & Shearer, A., 2716, July 31, Thinning [turnips, &c.].
 — T., 1661, May 4, Dredging or excavating.
 — W. B., 602, Feb. 18, Preventing pollution of [rivers, &c.].
 Willis, C., 1091, Mar. 25, Feeding steam-boilers.
 — C., & Pearson, W., 1491, Apr. 23, Pumps, &c.
 — J., 298, Jan. 26, Umbrellas and sunshades.
 — J., 4493, Dec. 24, Umbrellas and sunshades.
 — W. H., 1310, Apr. 16, Safety envelope.
 Willoughby, J. C., 3378, Sep. 28, Steam-engine valves, &c.
 Wills, T., & Woodall, C., 1891, May 24, Purifying gas.
 Willson, F. M. (Parsons & Grist), 1940, May 27, Knitting machines.
 — F. M., 3724, Oct. 27, Applying lamps to sewing-machines.
 Wilmart, O. J., 1085, Mar. 24, Welding wrought iron & steel.
 Wilson, A. (Lake), 2234, June 17, Steam-boiler valves.
 Wilson, C. (Stryker), 3495, Oct. 8, Excavating machines.
 — E., & Coupe, H., 1069, Mar. 24, Folding doors.
 — G. A., 1241, Apr. 6, Grinding apparatus.
 — J., 1831, May 18, Shuttles for looms.
 — J., 3855, Nov. 5, Worts for distilling grain.
 — J., 4091, Nov. 25, Utilizing waste heat of steam-boilers.
 — M., 2545, July 15, Stench-trap.
 — M., & Brook, W. P., 344, Jan. 29, Cooking.
 — M., & Turner, C. H., 2166, June 12, Bed cover [ing and rug].
 — M., McLay, J. C. S., Warren, F. P., & Brodie, W., 76, Jan. 8, Railway wheels and axles.
 — N., 1610, May 1, Sewing-machines.
 — R., 2436, July 6, Hydraulic presses.
 — R., 2599, July 21, Steam and other engines.
 — R., 2783, Aug. 7, Numbering, printing, &c., tickets.
 — R., 3094, Sep. 3, Polishing pencils, penholders, &c.
 — R. (Tideman), 1796, May 14, Floating docks.
 — R. A., 2841, Aug. 12, Steam-boiler furnaces.
 — S., & Davies, E., 3842, Nov. 4, Propelling vessels.
 — T. W., 474, Feb. 8, Cleaning bottles.
 — T. W., 1298, Apr. 9, Extracting bottle corks.
 — T. W., 1299, Apr. 9, Bottle-brushing.
 — T. W., 1329, Apr. 13, Bottle-crates.
 — W., & Battersby, J., 375, Feb. 2, Cutting roots.
 Wilton, T., 2295, June 23, Sash fastener.
 Wimshurst, E., 2453, July 7, Rotary-engines.
 Winchester, E. S., & Phelps, H. W. (Haseltine), 485, [Feb. 9, Rock-drills].
 Winder, Richard, & Pritchett, H., 1475, Apr. 22, Horse-shoes.
 — Robert, 74, Jan. 8, Distributing type.
 Winders, W., & Jackson, R., 3489, Oct. 8, Preparing fibres.
 Winkler, J. F., & Zeidler, A. A., 1601, Apr. 30, Wood-moulding.
 Winter, W., 2892, Aug. 17, Retaining window-blinds.
 Winton, J. P. de, 3455, Oct. 5, Slate-working.
 Wippen, F. W. (Lake), 2509, July 12, Galvanic apparatus.
 Wire, A. P., & Gard, W. G., 2125, June 9, Extracting [essence of meat].
 Wirth, F. (Emmerich), 193, Jan. 18, Fire-arms.
 — F. (Leiter), 296, Jan. 26, Electric apparatus.
 Wirth, F. (Knaust), 439, Feb. 5, Valves.
 — F. (Wertheim), 637, Feb. 20, Ship furnitures.
 — F. (Knaust), 678, Feb. 24, Stop-valves.
 — F. (Kuhlmann), 679, Feb. 24, Pegging boots.
 — F. (Neuss), 705, Feb. 25, Making needles.
 — F. (Kreittmayr), 959, Mar. 15, Plastic compounds.
 — F. (Goehring), 1135, Mar. 29, Treating yarns.
 — F. (Swanhäusser), 1236, Apr. 6, Copying pencils.
 — F. (Knaust), 1359, Apr. 14, Steam fire-engines.
 — F. (Timmer), 1377, Apr. 15, Fire-arms.
 — F. (van Baerle), 1382, Apr. 15, Bleaching fabrics, &c.
 — F. (Knaust), 1641, May 3, Steam fire-engine [locomotives].
 — F. (Continental Caoutchouc & Gutta-percha Co.), 1772, May 12, Horse-shoes.
 — F. (Gerlach), 2174, June 14, Decomposing distillates.
 — F. (Bühlmann), 2811, Aug. 10, Cleaning, &c., grits, &c.
 — F. (German Water-Work Association), 2884, Aug. 16, Water-meters.
 Wise, W. L. (Lévet), 3, Jan. 1, Boring rock, &c.
 — W. L. (Masui), 792, Mar. 3, Electric railway breaks.
 — W. L. (Solvay), 820, Mar. 5, Washing gas, &c.; [distilling liquids].
 — W. L. (Bertot), 899, Mar. 11, Propelling.
 — W. L. (Kay), 1461, Apr. 21, Knot-tying apparatus.
 — W. L. (Yagn), 1532, Apr. 26, Feeding steam-boilers.
 — W. L. (Herrmann), 2138, June 10, Floors for malt-kilns.
 — W. L. (Dary), 2139, June 10, Preserving fruits, &c. [during transport].
 — W. L. (Solvay), 2775, Aug. 5, Ammonia.
 — W. L. (Anthoni), 2828, Aug. 11, Springs and other [parts of carriages].
 — W. L. (Sweeney), 3179, Sep. 10, Purifying gas.
 — W. L. (Bauer), 3195, Sep. 11, Plaits or folds.
 — W. L. (Bauer), 3207, Sep. 13, Plaits or folds.
 — W. L. (Belvallette), 3754, Oct. 28, Arranging seats [in vessels to prevent sickness].
 — W. L. (Schönecker), 3783, Oct. 30, Boots & shoes.
 Witham, J., & Whitham, T., 3441, Oct. 4, Carding-engines.
 Withers, H. H., & Wells, W., 3025, Aug. 27, Reaping [machine binders].
 Witthöft, L. (Wedekind), 2941, Aug. 20, Steel.
 Wojewodsky, L. von, 1416, Apr. 19, Transit of wheel [carriages on roads].
 — L. von, 2527, July 14, Lighting cigars, &c.
 — L. von, 4424, Dec. 21, Facilitating transit [of wheeled carriages].
 Wolcott, C. C. (Johnson), 3789, Nov. 1, Motive-power [engines].
 Wolf, Jacob & J. (Lake), 4227, Dec. 6, Steam-engine [valves].
 — Joseph & J. (Lake), 4227, Dec. 6, Steam-engine [valves].
 Wolff, A. D. B. (Newton), 1785, May 13, Pianofortes.
 — A. D. B. (Newton), 3943, Nov. 12, Pianofortes.
 Wolff, J., & Betley, R., 2421, July 5, Aniline dyes.
 — J., & Byrom, W. A., 2422, July 5, Aniline.
 — J., & Betley, R., 2448, July 7, Naphthaline dyes.
 Wolfsky, M., 3797, Oct. 28, Travelling bags.
 Wollaston, C. J., 58, Jan. 6, Thermo-electric apparatus.
 — C. J., 2521, July 13, Purifying & decolorizing [dye waters, &c.].
 Wolseley, F. Y., 1206, Apr. 3, Shearing sheep, &c.
 Wolstencroft, E., 631, Feb. 20, Temples for looms.
 — E., 1408, Apr. 17, Temples for looms, &c.
 Wolstenholme, J., & Partington, T. & W., 3219, Sep. 15, [Shuttles].
 Wolverson, E., 763, Mar. 2, Corkscrews, augers, screw-drivers, &c.
 Wood, A. (Burlock), 1914, May 25, Lathes.

Wood, C., 1032, Mar. 20, Mineral trucks or wagons.
 — D., 1950, May 27, Wrenches or spanners.
 — G. R., 508, Feb. 11, Furnaces.
 — James F. R., 1220, Apr. 3, Printers' leads.
 — James L., 3616, Oct. 18, Blocks or bricks.
 — John, & Rollason, J. G., 1407, Apr. 17, Fastenings
 [for solitaires, &c.
 — Joseph W., & Shakespear, W. H., 3772, Oct. 30,
 [Train signalling.
 — R. J., 1121, Mar. 27, Engine counters.
 — R. J., 1832, May 18, Pyrometers.
 — R. J., 2076, June 5, Retorts, furnaces, &c.
 — W., & Farries, J. W., 2576, July 20, Regulating
 [boats of paddle-wheels.
 Wood, W. A. (Cranston), 2629, July 24, Collecting and
 [binding crops.
 Woodall, C., & Wills, T., 1891, May 24, Purifying gas.
 Woodburne, H., 2752, Aug. 4, Revolving shutters.
 Woodcock, H. B., & Jeffreys, E. A., 1174, Apr. 1, Rail-
 [way wheels.
 — W. H., 1345, Apr. 14, Damping rollers for
 [lithographic printing.
 — W. H., 1360, Apr. 14, Printing machinery.
 Woodford, E. G. & J. W., 1531, Apr. 26, Raising, &c.
 [water or air; dredging.
 — J. W. & E. G., 1531, Apr. 26, Raising, &c.
 [water or air; dredging.
 Woodhead, W., Shaw, B., & Crabtree, T., 740, Mar. 1,
 [Looms.
 Woodrow, P., & Smith, J. P., 2561, July 17, Forging &
 [shaping metals.
 Woods, J., 2942, Aug. 12, Tile for kilns.
 — W. F., 1492, Apr. 23, Drawing off liquids.
 Woodward, A., 3645, Oct. 20, Engine valves.
 — H., 4259, Dec. 8, Stamp and label affixer.
 — H. F., 551, Feb. 15, Overalls.
 Woolcott, H. W., 1775, May 13, Ships; propelling same.
 — J., 3310, Sep. 22, Gathering apples, &c.
 Wooton, W. S., Blake, J. G., & Fulton, H. H. (Lake), 1613,
 [May 1, Writing desks or tables.
 Wordsworth, H. C., 2411, July 3, Respirators.
 Workman, M. H., 3515, Oct. 9, Substance for sharpening.
 Wormald, J., & Bickerton, J., 4492, Dec. 24, Dissolving
 [snow.
 Worms de Romilly, H. F. L. (Clark), 1848, May 19,
 [impelling or forcing air.
 Wornum, A. N., 2223, June 16, Pianofortes.
 Worrall, A. J. & J., 189, Jan. 18, Shaping and cutting wire.
 — James, 1294, Apr. 9, Coloring pile fabrics.
 — Joseph & A. J., 189, Jan. 18, Shaping and cutting
 [wire.
 — S., 640, Feb. 22, Drawing card pins.
 Wotton, J., 2055, June 4, Soldering irons.
 Wragg, W. H., 4554, Dec. 31, Cutlery.
 Wrench, T., 3213, Sep. 14, Umbrellas.
 Wrest, W., & Bale, W. E., 3745, Oct. 28, Fleshing machines.
 Wright, A. S., & Harmer, J. N., 2242, June 18, Watch-
 [makers' peg wood, &c.
 — D. P., 1369, Apr. 15, Cooking stoves.
 — E., 754, Mar. 2, Transmitting &c., motion.
 — F., & Aubin, C., 2746, Aug. 4, Locks & latches.
 — F. H., & Whitehead, H. W., 3844, Nov. 4, Wash-
 [ing fibres.
 — John, 2955, Aug. 23, Storing gunpowder, &c.
 — John R., 2270, June 22, Gas furnaces.

Wright, Joseph R., 3194, Sep. 11, Umbrella wire.
 — M., & Pollard, J., 133, Jan. 13, Driving spindles.
 — T., & Saul, G., 4029, Nov. 20, Heating build-
 [ings, &c.
 — W., 3921, Nov. 11, Roller skates.
 — W., 4397, Dec. 18, Roller skates.
 — W., 4419, Dec. 21, Steam-boilers and furnaces.
 Wrigley, T., 2397, July 2, Copying letters, &c.
 — T., 3283, Sep. 20, Swimming apparatus.
 — T., 4376, Dec. 17, Spinning and doubling fibres.
 Wymer, E., 1463, Apr. 21, Abdominal belts.
 Wynne, F. G., 1493, Apr. 23, Railway signalling.
 Wyrill, M. B., 648, Feb. 22, Preparing & combing fibres.

Y.

Yagn, N. F. (Wise), 1532, Apr. 26, Feeding steam-boilers.
 Yates, R., & Brierley, G., 4488, Dec. 24, Looms.
 — W. E., 2070, June 5, Treating animal hide, &c.
 Yeadon, J., 1907, May 25, Scaffolding; raising materials.
 Yeomans, D. M., 1510, Apr. 24, Motive-power.
 Youard, H. G., 4340, Dec. 15, Cutting and pasting paper.
 Young, F., Hudleston, B., & Crisp, H., 2697, July 30,
 [Ascertaining distances.
 — James, 1689, May 6, Distance indicator for
 [vehicles.
 — John, 1549, Apr. 27, Water and air-proof fabrics.
 Young, Mc C. (Haseltine), 1317, Apr. 10, Match splints.
 Young, R., & Thomson, T., 1509, Apr. 24, Planing or
 [shaping stone, &c.
 — R. McL., 2944, Aug. 21, Sewing-machine.
 — W., 1880, May 22, Dressing stone.
 — W., 3137, Sep. 7, Obtaining hydro-carbon vapours.
 — W., & Aitken, H., 2725, Aug. 3, Gas.
 — W., & Brown, R., 3887, Nov. 9, Cutting stone,
 [marble, slate, &c.
 Young, Z. (Heath), 3385, Sep. 28, Button fasteners.
 Yule, J., 1759, May 11, Barge for conveying sewage.

Z.

Zalewski, A. (Spence), 2104, June 8, Thrashing machines.
 Zanni, G., 3795, Nov. 1, Magneto-electric apparatus.
 Zegut, E. (Tongue), 1978, May 31, Moulding cores, &c.
 Zeidler, A. A., & Winkler, J. F., 1601, Apr. 30, Wood-
 [moulding.
 Zieschang, B., & Barnett, J., 1396, Apr. 16, Cartridges.
 Ziffer, F. H., 1730, May 10, Looms.
 Zimmermann, E., & Knoblauch, R. (Knoblauch), 1540,
 [Apr. 27, Signalling in trains; breaka.
 — E., & Knoblauch, R. (Knoblauch), 1541,
 [Apr. 27, Railway signals.
 Zimmermann, J. F., 95, Jan. 11, Candle holders.
 Zimmermann, P. (Simon), 2329, June 26, Measuring, &c.
 [granular materials.
 Zingler, M., 1276, Apr. 8, Preparing oils.
 Zysel, F., & Warschawsky, J., 347, Jan. 29, Pressing or
 [ironing.
 Zuccato, E. de, 3659, Oct. 21, Piercing cigars.

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15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII.



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1877.

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[The names printed in *Italic* are those of the persons by whom the inventions have been communicated to the Applicants for Letters Patent.]

[Abb]

[Ada]

Name.	Number of Applica- tion.	Date of Applica- tion.	Subject.
A.			
Abbey, R. - - - - -	3941	Oct. 12	Slabs or pads for writing desks.
Abbott, S. - - - - -	475	Feb. 5	Railway couplings.
Abel, C. D. (<i>Nugent</i>) - - - - -	187	Jan. 18	Flanging boiler-heads, &c.
„ C. D. (<i>Nugent</i>) - - - - -	381	Jan. 31	Flanging holes in metal plates.
„ C. D. (<i>Royer de la Bastie</i>) - - - - -	1908	May 6	Tempering glass bottles, &c.
„ C. D. (<i>Otto</i>) - - - - -	2081	May 17	Gas-motor engines.
„ C. D. (<i>Fauvelle-Delebarre & Des- champs, Maurey & Co.</i>) - - - - -	2346	June 5	Toilet brushes and combs.
„ C. D. (<i>Beissel</i>) - - - - -	3488	Sep. 5	Motor-engines worked by steam, &c.
„ C. D. (<i>Hock & Co.</i>) - - - - -	3550	Sep. 9	Hot-air motor-engines.
„ C. D. (<i>Steinmüller & Steinmüller</i>) - - - - -	3646	Sep. 18	Steam-boilers.
„ C. D. (<i>Petzold & Sanden</i>) - - - - -	3748	Sep. 26	Extinguishing sparks in steam-boiler flues, &c.
„ C. D. (<i>De Lagillardaie</i>) - - - - -	3839	Oct. 4	Inkstands.
„ C. D. (<i>Ifland & Hadenfeld</i>) - - - - -	4165	Oct. 27	Indicating leeway and speed of vessels.
„ C. D. (<i>Ifland & Hadenfeld</i>) - - - - -	4166	Oct. 27	Automatic feed for steam-boilers.
„ C. D. (<i>Mitter & Wesenfeld</i>) - - - - -	4215	Oct. 31	Metal plates for bearing loads.
„ C. D. (<i>Pintsch</i>) - - - - -	4515	Nov. 21	Floating lights.
„ C. D. (<i>Langlet</i>) - - - - -	4516	Nov. 21	Purifying sewage and foul waters.
„ C. D. (<i>Thelen</i>) - - - - -	4875	Dec. 18	Preventing incrustation in and removing. [deposits from pans for evaporating, &c.]
„ C. D. (<i>Beissel</i>) - - - - -	5042	Dec. 29	Steam or fluid pressure engines.
„ C. D. (<i>Rousselot</i>) - - - - -	5050	Dec. 30	Sugar-cane mills.
Abel, G., & Pedder, J. (<i>King</i>) - - - - -	1056	Mar. 11	Table cutlery.
Abraham, B. - - - - -	738	Feb. 22	Railway signals.
Acaster, A. J. - - - - -	4884	Dec. 18	Rail-joints for railways.
Achilles, G., & Greig, D. - - - - -	3333	Aug. 24	Traction-engines and other locomotives.
Achtelstetter, T., & Von Sawiczewsky, S. [<i>Jensen</i>]. - - - - -	1492	Apr. 7	Preserving meat.
Ackroyd, G. - - - - -	144	Jan. 13	Preventing damage to combs in wool combing.
„ R. G., Ambler, A., & Banks, J. - - - - -	2264	May 30	Combing fibres.
Adair Packing Co. (<i>Hunt</i>) - - - - -	3564	Sep. 12	Packing for pistons.
Adair, W. - - - - -	414	Feb. 2	Pumps.
Adam, W., & Tomkinson, M. - - - - -	3795	Sep. 29	Carpets and rugs.
„ W., & Tomkinson, M. - - - - -	4150	Oct. 26	Chenille rugs and making same.
„ W., & Tomkinson, M. - - - - -	4931	Dec. 21	Looms.
Adams, A. P., & Wiles T. S. (<i>Newton</i>) - - - - -	1971	May 10	Ironing-machines.
„ A. P., & Wiles T. S. (<i>Newton</i>) - - - - -	1987	May 11	Starching textile substances.

Name.	Number of Application.	Date of Application.	Subject.
Adams, A. W. - - - - -	3837	Oct. 4	Box or mould for ice-making machinery.
" E. C., Browne, S. G., Boby, [W., & Lilley, J.	964	Mar. 6	Hydraulic elevator.
" G. - - - - -	4320	Nov. 8	Printing on wire, zinc, &c. for blinds.
" J. - - - - -	1438	Apr. 4	Roller or rink skates.
" J. H. - - - - -	4408	Nov. 14	Steam-boilers and tubes for same.
" W. F. - - - - -	1551	Apr. 12	Detaching hook for boats, &c.
Adamson, W. (Johnson) - - - - -	4112	Oct. 24	Treating substances with hydrocarbons, &c.
Adamson, W. B. - - - - -	3453	Sep. 1	Cutting or dressing stone, &c.; tools and tool-holders for same.
Addyman, C. H. (Grayson) - - - - -	2484	June 15	Friction-clutches and pulleys.
Adie, P. - - - - -	2697	June 30	Astronomical and surveying instruments.
Adkins, F. - - - - -	3610	Sep. 15	Tanged spades and shovels.
Admant, J. B., & Durand, A. (Brewer)	2955	July 20	Rink or roller skates.
Agar, H. - - - - -	375	Jan. 31	Fire-escapes.
Agate, J. - - - - -	1015	Mar. 9	Registering tills.
Ager, G. - - - - -	1681	Apr. 21	Heating tea and coffee pots, &c.
" N. - - - - -	555	Feb. 11	Locks for railway and other carriages.
Ahrbecker, H. C. - - - - -	3614	Oct. 10	Fluid-meters.
Ahrnsberg, I. - - - - -	1787	Apr. 28	Steering vessels.
" I. - - - - -	2205	May 25	Stopping railway trains.
Aked, J., & Barker, D. - - - - -	632	Feb. 16	Spinning and twisting.
Ainley, H. - - - - -	3200	Aug. 14	Weaving.
Ainsley, D. - - - - -	2463	June 14	Boring machinery for mining.
Aitken, J. B., & Davis, G. E. - - - - -	4048	Oct. 19	Treating phosphates of alumina, or of alumina [and iron for product
" T. - - - - -	826	Feb. 28	Driving-belts.
Ajax, J. R., & France, C. B. - - - - -	4341	Nov. 9	Corset-fasteners and stay-busks.
Albaret, A. B. (Johnson) - - - - -	514	Feb. 9	Transmitting power, multiplying speed, &c.
Albert, E. & H. (Gerland) - - - - -	4667	Dec. 2	Pulverising minerals and other substances.
" H. & E. (Gerland) - - - - -	4667	Dec. 2	Pulverising minerals and other substances.
Alberty, G. & O. - - - - -	2188	May 20	Imitation inlaid wood-work.
" O. & G. - - - - -	2138	May 20	Imitation inlaid wood-work.
Alder, V. (Johnson) - - - - -	3791	Sep. 29	Applying counter-pressure to engine levers, &c.
Alderman, A. J. - - - - -	3562	Sep. 11	Stopping and controlling ships' cables.
Aldred, T. - - - - -	5064	Dec. 30	Looms.
Alessandro, B. B. d' (Hunt) - - - - -	2965	July 21	Life-saving dress or garment.
" B. B. d' (Hunt) - - - - -	3906	Oct. 10	Travelling satchel or purse.
Alexander, E., & Lansley, D. T. - - - - -	1084	Mar. 13	Boilers.
" E. P. (Hyde) - - - - -	105	Jan. 10	Boat-detaching apparatus.
" E. P. (Kaselsowsky) - - - - -	609	Feb. 15	Dredging machinery.
" E. P. (Büsche) - - - - -	741	Feb. 22	Railway couplings.
" E. P. (Dietz-Monvin) - - - - -	1091	Mar. 13	Pocket alarums.
" E. P. (Lemaire-Douchy) - - - - -	2107	May 18	Ascertaining composition of air in mines.
" E. P. (Jenison) - - - - -	2488	June 15	Heating and ventilating buildings, &c.
" E. P. (Cathelineau & Guépin) - - - - -	2640	June 27	Lasting boots; stretching leather and skins.
" E. P. (Michel) - - - - -	2916	July 17	Removing vegetable substances from textile [fabrics, &c.
" E. P. (Wackernie) - - - - -	3401	Aug. 29	Furnace fire-bars and actuating same.
" E. P. (Du Mont) - - - - -	4368	Nov. 11	Paving roads, &c. and treating wood.
" E. P. (Michel) - - - - -	4580	Nov. 27	Destroying vegetable fibres in woollen, silk, or [mixed fabrics.
" J. - - - - -	4969	Dec. 23	Air-compressing engines.
Alford, W. H. - - - - -	1528	Apr. 11	Finger rings, bracelets, &c.
Allan, A. - - - - -	1405	Apr. 1	Pressure and vacuum gauges.
" G. - - - - -	3933	Oct. 11	Damping paper for printing.
" G., & Brown, J. W. - - - - -	1757	Apr. 26	Electric-telegraphs.
Allard, F. (Gedge) - - - - -	3172	Aug. 11	Waggons or trucks for coal, &c.
Allcock, T. - - - - -	2572	June 22	Chaff-cutting machines.
Allen, A. H. - - - - -	4468	Nov. 18	Treating ores for obtaining nickel, &c.
" C. - - - - -	748	Feb. 23	Bottle-stoppers.
" J. F. - - - - -	3399	Aug. 29	Rivetting-machines and supporting same.
" R. N., & Pullman, A. B. - - - - -	40	Jan. 4	Railway wheels.

Name.	Number of Application.	Date of Application.	Subject.
Allen, T. - - - - -	1568	Apr. 13	Cisterns.
" T. - - - - -	2986	July 24	Boxes for matches, &c.
" T., & Dawson, T. - - -	3926	Oct. 11	Dress fasteners.
" T. P. - - - - -	10	Jan. 1	Metal tubes.
Alley, S. - - - - -	4070	Oct. 21	Sluice and other valves and making same.
" S., Carruthers, J. H., & Handy- [side, J. B.]	3155	Aug. 9	Wheels.
Allin, S. S. - - - - -	1953	May 10	Roller skates.
" S. S. - - - - -	4359	Nov. 11	Roller skates.
Allison, T. - - - - -	4984	Dec. 23	Taps for steam and water.
Allix, G. - - - - -	2559	June 21	Roller or rink skates.
" G., Barrett, H., & Elers, C. G.	1798	Apr. 28	Roller or rink skates.
Allmann, J., & Turton, S. - -	173	Jan. 17	Low-water alarm for steam-boilers.
Allmark, J., Haigh, B., & Chadder- [ton, J.]	169	Jan. 15	Stem-engine valves.
Allport, S. B. - - - - -	688	Feb. 18	Gun-wads and non-metallic discs.
Almgill, T. - - - - -	1789	Apr. 28	Measuring liquids.
Ambler, A., Banks, J., & Ackroyd, R. G.	2264	May 30	Combing fibres.
American Cable Screw Wire Co. (Lake)	920	Mar. 3	Uniting boot-uppers, hose-tube seams, &c.
" Screw Co. (Lake) - - -	3998	Oct. 16	Shaving and nicking screws.
" Screw Co. (Lake) - - -	4891	Dec. 18	Screw-making machinery.
" Tube Works (Lake) - - -	4938	Dec. 21	Hollow metal rolls and tubes.
Ames, G. H. (Haddan) - - -	4334	Nov. 9	Car couplings.
Amieus, Brothers (Lake) - - -	2911	July 15	Preserved food boxes or cases.
Ancarkrona, E. (Nordenfelt) - -	875	Mar. 1	Sewing-machine shuttles.
Anderson, A. - - - - -	4456	Nov. 17	Sewing-machines; winding spools; cop-cases.
Anderson, A. (Christie) - - -	4184	Oct. 28	Cutting hay, chaff, &c.
Anderson, A., & Thirsk, D. - -	3463	Sep. 2	Grinding mill.
" C. - - - - -	2691	June 30	Connecting gas and water pipes.
" G. - - - - -	3900	Oct. 9	Ventilators.
" G., & Jennings, G. - -	2470	June 14	Propagating and preserving oysters.
" Sir J., & Ash, W. H. - -	14	Jan. 1	Electric-telegraphs.
Anderson, J. H. (Herts) - - -	3492	Sep. 5	Protector for trouser bottoms.
Anderson, R. C. - - - - -	3510	Sep. 6	Valves.
" R. C. - - - - -	4722	Dec. 6	Safety-valves.
" S., & Rogers, J. B. - -	190	Jan. 18	Cork beds; life-preservers.
" S., & Dry, J. R. - - -	4921	Dec. 20	Treating, opening, &c. flax and other fibres.
" T. - - - - -	2467	June 14	Signalling in trains and working brakes.
Anderson, V. D. (Thompson) - -	2909	July 15	Steam-boilers.
Anderson, W. (Makaroff) - - -	1066	Mar. 11	Working bilge pumps.
" W. (Chernoff) - - -	2506	June 16	Gas furnaces.
" W., & Razkazoff, L. - -	388	Jan. 31	Working heavy guns.
Andrade, M. (De Pass) - - -	772	Feb. 24	Steam-engine governors.
Andrew, W. H. - - - - -	189	Jan. 18	Spades, shovels, forks, &c.
" W. H. - - - - -	1506	Apr. 8	Railway carriage springs.
" W. H. - - - - -	2598	June 23	Spades, shovels, forks, &c.
Andrews, A. C. - - - - -	221	Jan. 20	Sewing-machines.
" A. S. - - - - -	1482	Apr. 5	Reaping and mowing machines.
" D. A. - - - - -	1777	Apr. 27	Making animal-shoe nails.
Andrews, E. P. S. (McCormick) - -	764	Feb. 23	Tables for vessels.
Andrews, G. - - - - -	2298	May 31	Tension device for blind cords.
" S. - - - - -	3115	Aug. 4	Fastenings for mill-banding, &c.
" W. - - - - -	2247	May 29	Cleaning boots, shoes, &c.
" W. - - - - -	4788	Dec. 11	Water-gauges or stop-valves.
Andrews, W. D. (Newton) - - -	508	Feb. 8	Centrifugal pumps.
Andrews, W. W., & Urquhart, J. -	104	Jan. 8	Gas-meters.
Angell, E. C. (Clark) - - -	864	Mar. 1	Heat radiators.
Angelo, fu de Ferrari, G. B., & Jarves, [J. J.]	3630	Sep. 16	Heating steam-boilers, furnaces, &c.
Anglin, T. M. (Jensen) - - -	1862	May 3	Fire-alarms for buildings.
Angot, G. F. (Newton) - - -	1006	Mar. 8	Constructing merchant ships.
Anidjah, L. - - - - -	1468	Apr. 6	Couches.
Ann, R. H. - - - - -	4512	Nov. 21	Boxes for matches, pens, needles, &c.

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<i>Anschel, A., & Herberts, G. (Wülfing)</i>	1958	May 10	Buttons.
Anson, W. - - - - -	4513	Nov. 21	Safety apparatus for fire-arms.
Anyon, W. - - - - -	1507	Apr. 8	Roller skates.
<i>Appel, F., & Monmon, F. H. (Day)</i>	3540	Sep. 8	Printing in various colors.
Apperly, J. - - - - -	3483	Sep. 4	Rotary steam-engines.
Applegath, F. - - - - -	1366	Mar. 30	Weirs or annicuts, and sluices for same.
Applegarth, R. (<i>Jablochkoff</i>) - - -	3552	Sep. 11	Electric-light.
<i>Appleton, C. J. (Lake)</i> - - - - -	1079	Mar. 11	Knitting-machinery.
" C. J. (Lake) - - - - -	1749	Apr. 26	Embroidery knitting.
" C. J. (Lake) - - - - -	2657	June 27	Seaming, &c. knitted or other fabrics.
Appleyard, T. W. & W. K. - - -	2547	June 20	Fleshing, &c. leather.
" W. K. & T. W. - - - - -	2547	June 20	Fleshing, &c. leather.
Aragon, J. P. de (<i>De La Torre y Mon-</i> [<i>talbo</i>]).	4199	Oct. 30	Hand and sewing-machine needles.
Archbold, G., Cooper, W. J., & [Wanklyn, J. A.]	1172	Mar. 18	Distilling, &c. spirits.
<i>Archer, J. (Waterhouse)</i> - - - - -	403	Feb. 1	Supplying water to houses, &c.
Archer, T. - - - - -	605	Feb. 14	Crushing bones, oil-cake, &c.
<i>Archinard & Socin (Bousfield)</i> - -	421	Feb. 2	Preserving telegraph posts.
<i>Ardelt, R., & Eickhoff, B. & C. (Pieper)</i>	4673	Dec. 2	Safety-apparatus for hoisting-cages.
Arding, F. (<i>Pennie</i>) - - - - -	3087	Aug. 2	Coupling for pipes or hose.
<i>Armengaud, C. E. (Neale)</i> - - - - -	1103	Mar. 14	Sulphuric acid.
Armit, R. H. - - - - -	1030	Mar. 9	Distance and speed indicator for ships.
" R. H. - - - - -	3618	Sep. 15	Screw-propellers.
" R. H., & Wickens, H. - - -	4638	Nov. 30	Constructing ships to protect from injury by [ram, &
Armitage, W., & Johnson, W. H. -	3238	Aug. 17	Weaving wire-gauze.
<i>Armstrong, Amelia P., Thiers, W. F.,</i> [<i>Jeffers, M. C., Beecher, E. F. (Mills)</i>]	3585	Sep. 13	Ventilating, disinfecting, and fog-alarm appa- [ratus for ships, &c.
<i>Armstrong, F. (Lake)</i> - - - - -	1577	Apr. 13	Braces or suspenders, straps, &c.
Armstrong, John - - - - -	4897	Dec. 19	Wood pavement.
" Joseph - - - - -	4866	Dec. 16	Railway wheels.
Arnaud, A. - - - - -	2217	May 26	Thief-detector and fire-alarm.
Arnold, W., & Gillott, J. - - -	2004	May 12	Motive-power engines and boilers.
Aron, A. (<i>Pingot</i>) - - - - -	5059	Dec. 30	Fastener for neckties and like articles.
Aronson, J. N. - - - - -	1767	Apr. 27	Rink chair.
Artingstall, F. D. - - - - -	4600	Nov. 28	Spring-balances.
<i>Asbeck, Osthaus, Eicken, & Co. (von</i> [<i>Nawrocki</i>]).	2689	June 29	Armour-plates.
" <i>Osthaus, Eicken, & Co. (von</i> [<i>Nawrocki</i>]).	2704	July 1	Uniting iron and steel.
Asbury, C. - - - - -	203	Jan. 18	Steam-boilers.
" C. - - - - -	258	Jan. 22	Skating rink floor.
<i>Asbury, T. H. (Hunt)</i> - - - - -	4018	Oct. 18	Sad-irons and grinding same.
Ash, W. H., & Anderson, Sir J. -	14	Jan. 1	Electric-telegraphs.
Ashcroft, J. - - - - -	4651	Dec. 1	Marking and recording billiards, &c.
" J. - - - - -	4970	Dec. 23	Bleaching kiers.
" J., & Moseley, W. - - -	2263	May 30	Marking billiard and other games.
Ashenhurst, J. T. - - - - -	3375	Aug. 28	Castors.
Ashing, Emma E. - - - - -	3487	Sep. 5	Solitaires, studs, &c.
Ashmore, C. T. (<i>Dodge & Olcott</i>) -	1106	Mar. 14	Baking-powders.
Ashwell, J. R. - - - - -	4625	Nov. 29	Dyeing hosiery goods.
" W. H., Bolton, F. J., & Beau- [mont, F. E. B.]	3277	Aug. 21	Making and utilising slag castings.
Ashworth, A. - - - - -	3355	Aug. 26	Hats.
" E., G. & R. - - - - -	3909	Oct. 10	Wire or metal brushes for carding, &c.
" G., R. & E. - - - - -	3909	Oct. 10	Wire or metal brushes for carding, &c.
" J., Greenwood, J., & Red- [fern, R.]	4895	Dec. 19	Constructing loom "swells."
" R., E. & G. - - - - -	3909	Oct. 10	Wire or metal brushes for carding, &c.
Aspinall, A. J. - - - - -	537	Feb. 10	Sliding boxes for matches, &c.
Aspinwall, L. A. - - - - -	3883	Oct. 7	Potato-diggers.
" L. A. - - - - -	4288	Nov. 6	Potato-diggers.

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Asquith, R., & Jackson, W. L. - -	120	Jan. 11	Stocks for leather-making, &c.
Astier, V. (Mills) - - - - -	3846	Oct. 4	Cutting or breaking sugar.
Astley, J., & Davies, F. - - - -	1370	Mar. 30	Knitting healds.
Aston, J. - - - - -	696	Feb. 19	Fire-arms.
Astrop, W. - - - - -	1956	May 10	Folding perambulators.
Atherton, J. - - - - -	955	Mar. 6	Glass-making.
Atkins, W., & Powell, R. - - - -	4362	Nov. 11	Hyposulphite of soda.
Atkinson, G. T. - - - - -	4333	Nov. 9	Horse-shoes and attachments.
Atkinson, H. (Russell) - - - - -	4585	Nov. 27	Charging and drawing gas-retorts.
Atkinson, J., & Temple, T. - - - -	588	Feb. 12	Communicating to engine-driver, &c. on trams.
Atterbury, J. H. - - - - -	2596	June 23	Moulding and pressing bricks, &c.
Attwood, C., & Potter, J. J. - - -	2275	May 30	Glazing buildings.
Atwood, A., & Shepard, A. D. (Clark) -	1641	Apr. 19	Railway wheels.
Aubert, A. - - - - -	4034	Oct. 19	Screw-propellers.
Audouin, M. E. P. (Clark) - - - -	1398	Mar. 31	Lining for furnaces.
Audus, J. M., & Bates, N. - - - -	2315	June 1	Scouring and polishing grain.
Aulagnier, C. L. (Soldano) - - - -	2578	June 22	Watches.
Auld, W. W. (Johnston) - - - - -	4782	Dec. 11	Preparing and combining substances for food.
Ault, H. H., Knowles, W., & Murdoch, W. -	330	Jan. 27	Anti-incrustation composition.
Austin, J. B., & Smith, G. A. - - -	4700	Dec. 5	Rack for holding billiard cues.
" T. - - - - -	2412	June 10	Money or coin exchange apparatus.
" W. - - - - -	2091	May 17	Making cylindrical box tops, &c.
Avery, W. B. - - - - -	1710	Apr. 22	Weighing-machines and scale-beams.
Aydon, H. - - - - -	4678	Dec. 4	Counting needles, gill and heckle pins, &c.
Ayres, J. A. (Haddan) - - - - -	4140	Oct. 25	Raising water by compressed air.

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Babbe, F. H. B. - - - - -	2037	May 15	Screw-propellers.
Babbitt, B. T. (Newton) - - - - -	303	Jan. 25	Steam-boilers and furnaces.
" B. T., & Holske, W. F. (Clark) -	90	Jan. 7	Friction-clutches.
Babcock, Howes, & Co. (Lake) - - -	3901	Oct. 9	Separating grain from dust, &c.
Badcock, J. - - - - -	209	Jan. 19	Bustles or dress improvers.
Badoureaux, Bertin, alias Bertin, L. (Clark) -	355	Jan. 28	Hardening wood.
Baffoy, P. H., Dupré, P. S. E., Rogé, [H. N., & Poret, E. (Clark) -	3823	Oct. 3	Treating grain, plants, &c. for preserving same.
Baggeley, H. - - - - -	405	Feb. 1	Compound for making crucibles, &c.
Bagnall, S. - - - - -	3038	July 28	Doubling yarns.
" S., & Taylor, E. - - - - -	3413	Aug. 30	Dress or curtain holder.
Bagot, A. C. - - - - -	2227	May 27	Clinometer instruments.
Bailes, R., & Hallsworth, S. - - - -	869	Mar. 1	Purifying gas.
Bailey, F. L. (Lake) - - - - -	1703	Apr. 21	Machine-guns.
Bailey, G. - - - - -	3818	Oct. 2	Planing, shaping, slotting, &c. machines.
" I., & Smith, D. - - - - -	1248	Mar. 23	Combing fibres.
" I., & Smith, D. & L. - - - - -	123	Jan. 11	Combing fibres.
" J. B. - - - - -	3820	Oct. 2	Making paper tubes.
" J. H. - - - - -	1910	May 6	Railway signals.
" N. S. - - - - -	4769	Dec. 9	Castors or feet for furniture.
" T. - - - - -	3240	Aug. 17	Fire-arms.
" W. H., & Baldwin, T. - - - - -	3227	Aug. 16	Pressure-gauges.
Bain, W. P. C. - - - - -	5029	Dec. 29	" Dropper " for retaining wires of wire fences.
Baird, A., & McPherson, G. - - - -	2802	July 10	Lubricating axles of coal hutches, &c.
Bairnsfather, S., & Harper, R. R. -	5	Jan. 1	Railway-signals.
Baker, B. F., & Wilcox, W. C. - - -	244	Jan. 21	Steam-engine.
" G. & W. - - - - -	2149	May 20	Wheel or roller skates.
" H. - - - - -	2989	July 24	Preparing or cutting suet, &c.
" J., & Hetherington, J. M. - - -	1800	Apr. 28	Mules.
" J. M. - - - - -	1202	Mar. 21	Horse-hoes.

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Baker, T. H., & Francis, W.	4896	Dec. 19	Cleaning, dressing, &c. cotton and other seeds.
" W.	3850	Oct. 5	Producing iron and steel.
" W. & G.	2149	May 20	Wheel or roller skates.
Bakewell, A.	923	Mar. 4	Armour for plating ships.
Balcon, W.	4089	Oct. 23	Lamp-lighter.
Baldwin, P. B. (Smith)	3856	Oct. 5	Protractor for ascertaining angles.
Baldwin, T.	736	Feb. 22	Crushing and pulverising stone, &c.
" T., & Bailey, W. H.	3227	Aug. 16	Pressure-gauges.
Ball, C. J. (<i>Decoudun</i>)	2717	July 1	Ironing and finishing linen, &c.
" C. J. (<i>Cleuet</i>)	3568	Sep. 12	Carriage shafts.
" H. W., & McKendrick, J.	3743	Sep. 25	Distilling water.
" H. W., Watson, R. G., & [McKendrick, J.]	3882	Oct. 7	Motor, pump, or meter and valves for same.
Ballin, C. C. (Clark)	4103	Oct. 23	Artificial flowers, fruit, grasses, &c.
Ballou, F. D. (Lake)	2670	June 28	Sewing-machines.
Bamford, H.	4888	Dec. 18	Side-valves for steam-engines.
" S.	2477	June 15	Separating wool from mixed woollen-fabrics.
" W., & Taylor, G.	1996	May 12	Furnaces.
Bamlett, A. C.	3560	Sep. 11	Reaping and mowing machines.
Banderali, D. J. F. S., & Delebecque, E. [(Lake).]	1524	Apr. 10	Stopping railway trains.
Bandier, J. (Clark)	2629	July 11	Ornamenting match-boxes.
Banks, C.	848	Feb. 29	Tap for liquids.
" J.	2311	June 1	Ventilators.
" J., Ackroyd, R. G., & Ambler, A.	2264	May 30	Combing fibres.
" J. R.	1509	Apr. 8	Railway and tramway wheels.
" L., & Wright, R.	2880	July 14	Armour-plating.
" T.	1999	May 12	Crochet-hook.
Bannehr, J., & Varley, S. A.	1739	Apr. 25	Intercepting and treating sewage.
Bantock, J. W.	4806	Dec. 12	Nitro-celluloses for war and other purposes.
Baranowski, J. J., & Nowakowski, S.	2604	June 24	Roller skates.
Barbary, A. (Clark)	4245	Nov. 2	Washing small coal, &c.
Barbaudy, G.	1875	May 4	Food for horses, &c.
Barber, F. (<i>Vossnach</i>)	2306	June 1	Furnaces for steam-boilers, &c.
" H., & Crocker, G. T. O.	3311	Aug. 23	Sleigh for skating-rinks.
" L. L.	2700	June 30	Sewing-machine attachments.
" R.	2435	June 13	Combustion of fuel.
Barbier, J. P.	3803	Sep. 30	Forming factitious stones for building.
Barbour, D.	175	Jan. 17	Weaving ornamental fabrics.
" J.	255	Jan. 21	Spinning rope yarns, &c.
" J.	1553	Apr. 12	Hackling and preparing fibres.
" J.	1968	May 10	Fluting-machines.
" J. (<i>Coulter</i>)	1708	Apr. 22	Lubricating-cups.
" J. & S.	1970	May 10	Balling-machines.
" S. & J.	1970	May 10	Balling-machines.
Barclay, J. W., & Sellar, R.	2987	July 24	Cultivator and digger.
" W.	77	Jan. 7	Tramways and tramway cars.
Barcroft, H.	3938	Oct. 12	Damasks and similar materials.
Bardell, A., & Edgar, J. (Bonneville)	4732	Dec. 7	Frying-pans.
Bardsley, J.	2785	July 8	Flooring-cramps.
" J., & Hargreaves, R.	1837	May 2	Drawing off liquors from casks.
Barff, A., & Bradshaw, A.	1923	May 8	Steam-traps.
" F. S.	743	Feb. 22	Preserving animal and vegetable matters.
" F. S.	862	Feb. 29	Protecting, &c. iron surfaces.
Barham, H.	4201	Oct. 30	Glazing roofs and ventilating same.
Barker, B.	1281	Mar. 25	Tramways.
" D., & Aked, J.	632	Feb. 16	Spinning and twisting.
" E. D.	2790	July 8	Railway breaks; steam-pumps.
" F.	2267	May 30	Magnetic compasses.
" F.	4558	Nov. 24	Wheels for carriages, tramway cars, &c.
" G.	2407	June 10	Fire-grates, stoves, and fire-bars.
" T. & W.	4209	Oct. 31	Carding-engines.
" W. & T.	4209	Oct. 31	Carding-engines.

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Barlow, C. (<i>Cook</i>) - - - - -	73	Jan. 7	Press for forming concrete, &c. blocks.
" C. (<i>Dixon</i>) - - - - -	74	Jan. 7	Railway car axles.
" C. (<i>Cook</i>) - - - - -	75	Jan. 7	Making concrete, artificial stone, and fuel [blocks.
" C. (<i>Hearle</i>) - - - - -	417	Feb. 2	Extinguishing fire.
" H. B. (<i>Galland</i>) - - - - -	2825	July 11	Malting.
" H. B. (<i>Seck</i>) - - - - -	4663	Dec. 2	Ventilating cases of millstones.
" P. W. & P. W. - - - - -	658	Feb. 17	Laying, &c. subaqueous tubes.
Barlow, S. (<i>Morgan-Brown</i>) - - -	1654	Apr. 20	Ornamental textile fabrics.
Barlow, W. A., & Davis, H. T. - -	1726	Apr. 24	Registering attachment for skates, &c.
Barmen Artificial Ice Factory (<i>Wirth</i>)	2601	June 23	Artificial ice.
Barnard & Leas Manufacturing Co. [(<i>Haddan</i>).	4282	Nov. 6	Grain separators and scourers.
Barnes, E., Salmon, E., & Sawrey, J. S.	1890	May 5	Mangling, wringing, and drying.
" F. - - - - -	3684	Sep. 20	Connecting, &c. railway or tramway rolling [stock.
" F. W. - - - - -	272	Jan. 24	Weighing apparatus for ascertaining load on [locomotive wheels, &c.
" J. - - - - -	3939	Oct. 12	Water or other fluid-meters or motors.
" J., Crossland, W., & Westley, W.	4710	Dec. 5	Sizing and drying yarn and fabrics.
" R. W., & Brown, R. - - -	2367	June 6	Photography.
Barnett, E., & Nelson, J. W. - - -	1375	Mar. 30	Roller skates.
" J. - - - - -	1048	Mar. 10	Purifying iron; fettling furnaces.
" J. - - - - -	1049	Mar. 10	Material for furnaces.
" J. - - - - -	5009	Dec. 28	Iron and steel; hardening cast iron; pro- [tecting fire-chambers and vessels.
Barr, J. (<i>Lawrence</i>) - - - - -	4335	Nov. 9	Ironing-table.
" J. (<i>Lawrence</i>) - - - - -	4472	Nov. 18	Castor.
Barraclough, J. - - - - -	4210	Oct. 31	Looms.
Barrault, E. (<i>Murdoch</i>) - - - - -	240	Jan. 20	Sugar-making.
Barrell, E., & Meatyard, O. G. - -	4403	Nov. 14	Safety apparatus for railway trains.
Barrett, H., Elers, C. G., & Allix, G.	1798	Apr. 28	Roller or rink skates.
" J. H., & Hargreaves, L. - -	397	Feb. 1	Regulating, &c. flow of liquids.
" W. F. - - - - -	3341	Aug. 25	Safes and alarms for same.
Barrie, P., & Samson, W. - - - -	473	Feb. 5	Bottle-stoppers.
Barron, H. S. - - - - -	4235	Nov. 2	Steam-generators.
Barrow, T. - - - - -	4021	Oct. 18	Consuming smoke, &c.; steam-boilers.
Barter, B. (<i>Spence</i>) - - - - -	2858	July 13	Cleansing and purifying middlings.
Bartholomew, C. - - - - -	293	Jan. 25	Diving dresses, &c.; raising sunken vessels.
" C. & C. W. - - - - -	5017	Dec. 28	Blasting and blasting cartridges.
" C. W. & C. - - - - -	5017	Dec. 28	Blasting and blasting cartridges.
Bartlett, G. - - - - -	4774	Dec. 9	Water-filters.
Bartlett, H. T., & Read, G. W. (<i>Clark</i>)	1407	Apr. 1	Cutting veneers.
Bartlett, J., & Murray, W. M. - -	3165	Aug. 10	Making type.
Barton, H. M. R. - - - - -	1163	Mar. 18	Brake for vehicles.
Barton, I. (<i>Haddan</i>) - - - - -	2255	May 29	Steam-boilers.
Basire, J., & Howell, J. H. - - -	4316	Nov. 8	Charging, &c. fuel in open fires.
Bastet, L. (<i>Clark</i>) - - - - -	1931	May 8	Electro-magnetic engines.
Bastie, F. B. A. <i>Royer de la</i> (<i>Abel</i>) -	1908	May 6	Tempering glass bottles, &c.
Batchelder, H. J. (<i>Flagler & Very</i>) -	2839	July 12	Horse-shoe machines.
Batchelor, H. & T. C. - - - - -	2653	June 27	Making working drawings or diagrams.
" T. C. & H. - - - - -	2653	June 27	Making working drawings or diagrams.
Bate, C. McG. - - - - -	523	Feb. 9	Roller skates.
" C. McG. - - - - -	1101	Mar. 14	Roller skates and velocipedes.
" H. - - - - -	2332	June 2	Horse-clipping machine.
" H. - - - - -	3814	Oct. 2	Velocipede.
" J., & Follows, F. W. - - - -	3187	Aug. 12	Footsteps and bearings.
Bate, J. J. (<i>Lake</i>) - - - - -	109	Jan. 10	Refrigerating apparatus.
Bates, N., & Andus, J. M. - - -	2315	June 1	Scouring and polishing grain.
Bathias, O. M. (<i>Bonneville</i>) - - -	2531	June 19	Registering speed of machinery.
Batley, J., Keats, J., & Neil, J. - -	4076	Oct. 21	Boots and shoes, and lasting, &c. same.
" W. S. - - - - -	921	Mar. 3	Mixing clay for bricks, &c.
Batt, H. - - - - -	592	Feb. 14	Scaffolding.

Name.	Number of Application.	Date of Application.	Subject.
Batten, C. W., Griffin, J., & Prudencio, [F.]	4510	Nov. 21	Bottles for aerated liquids, and stoppering [same.]
Battersby, J., & Wilson, W. - - -	350	Jan. 28	Horse-rakes.
" J., & Wilson, W. - - -	2723	July 1	Mowing and reaping machines.
Battinson, A., Sutcliffe, W., Murga- [troyd, J., & Rothwell, W.]	1861	May 3	Weaving.
" G. & I., & Whitehead, T.	1444	Apr. 4	Combing wool.
" I. & G., & Whitehead, T.	1444	Apr. 4	Combing wool.
Batty, M. & W. - - - - -	1737	Apr. 25	Railway signals.
" W. & M. - - - - -	1737	Apr. 25	Railway signals.
Baudoin, J., & Bombart, J. C. - -	3442	Sep. 1	Stenographing apparatus.
Bauer, G. W. M. (Pieper) - - -	1803	Apr. 28	Copying and multiplying apparatus.
Baumgarten, E. - - - - -	2770	July 7	Grinding twist and other drills.
" F. W. A., & Domeier, A.	4575	Nov. 25	Umbrellas, parasols, and sunshades.
Baur, J. - - - - -	370	Jan. 29	Making steel.
" J. - - - - -	379	Jan. 31	Making steel.
" J. - - - - -	4005	Oct. 17	Making steel.
Baville, E. P., & Greenwood, A.	4610	Nov. 28	Screw-cutting machinery and tools.
Bawtinheimer, P. M. - - - -	2574	June 22	Potato-digging machines.
Baxendale, R., & Heald, J. - - -	771	Feb. 24	Railway draw-bars.
Baxter, E. H. - - - - -	467	Feb. 5	Call and other bells.
" G., Greaves, T. W., & [Coggins, J.]	927	Mar. 4	Crochet-hooks, &c. and handles.
" J., & Shaw, T. R. - - - -	1504	Apr. 8	Packing for glands.
" W., & Greaves, T. - - - -	958	Mar. 6	Studs or solitaires.
" W. H. - - - - -	2872	July 13	Weighing and measuring machines.
Bay, C. S. de - - - - -	2577	June 22	Propelling ships.
Bayer, C. H. G., & Jahn, O. - - -	2428	June 12	Boot-cleaning machine.
Bayley, J., & Elliott, C. F. - - -	3322	Aug. 24	Stud for fastening zinc sheets, &c.
Baylis, C. - - - - -	3467	Sep. 2	Apparatus for containing, &c. aerated water; [unstopping bottles.]
Baylis, H., & Jenkins, H. M. (Clark)	1748	Apr. 25	Pins.
" J., & Dion, C. (Johnson) - -	3706	Sep. 21	Treating iron and steel.
Bayly, M. - - - - -	12	Jan. 1	Roller skates.
Bazille, A. (Henderson) - - - -	3625	Sep. 16	Revolving metal shutters.
Beadle, G. - - - - -	2782	July 8	Roller skates.
Beale, J. - - - - -	3501	Sep. 6	Breaks for railway and other carriages.
Beall, T. - - - - -	1512	Apr. 10	Bolt-fastenings.
Beanes, E., - - - - -	1773	Apr. 27	Sulphurous acid gas.
Beard, W. J., & Stephenson, G. - -	3915	Oct. 10	Washing-machines.
Beare, H. - - - - -	2178	May 23	Hay-making machines.
Beart, W. F. - - - - -	4412	Nov. 14	Drying-sheds and drying bricks.
Beattie, F. - - - - -	2292	May 31	Erecting girder-bridges and viaducts.
" F. H., & Reeves, F. W. - - -	1754	Apr. 26	Excavating or elevating sand, &c.
Beaumont, E. H. de la Bonninière, [Vicomte de (Johnson)]	3451	Sep. 1	Vaults or arches and ventilating, &c. same.
Beaumont, F. E. B. - - - - -	7	Jan. 1	Elastic-fluid motor-engines.
" F. E. B. - - - - -	2010	May 13	Steam-steering apparatus.
" F. E. B., & Pilkington, W.	1081	Mar. 11	Roller skates.
" F. E. B., & Foster, J. - - -	1390	Mar. 31	Rock-drills.
" F. E. B., Ashwell, W. H., [& Bolton, F. J.]	3277	Aug. 21	Making and utilising slag castings.
" S., & Mellor, T. K. - - - -	4819	Dec. 13	Cloth " raising " machines.
" W. E., & Nussey, G. H.	1742	Apr. 25	Weaving patterns on tweeds.
" W. W., - - - - -	2948	July 19	Roller skates.
Bebbington, G., & Pullan, A. & T. W.	4123	Oct. 24	Locomotives and carriages.
Beck, J., & Yates, H. - - - -	3769	Sep. 28	Reefing and furling sails.
" W. H. - - - - -	2853	July 13	Sewing boots and shoes.
" W. H. (Carroll) - - - - -	2539	June 19	Furnaces for gas-making, &c.
Becker, L., & Smith, S. M. (Fyfe)	2411	June 10	Washing-machines.
Beckett, F. R. - - - - -	2354	June 6	Valves.
" G. - - - - -	948	Mar. 4	Railway wheels.
Becks, A. T. - - - - -	3709	Sep. 22	Preventing corrosion in steam-boilers.

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Beckwith, J. H., & Galloway, C. J. - Bed Co., The Howe Spring (Moody, [Slade, & Haynes).	2439 4882	June 13 Dec. 18	Valve gear of steam-engines, &c. Spring-mattresses.
Béde, E. (Murdoch) - - - - -	3690	Sep. 30	Steam-boilers.
Beddell, O. T. (Clark) - - - - -	1123	Mar. 15	Screw-wrenches.
Beddow, S., & Sturmev, W. - - - -	3403	Aug. 29	Locks.
" S., & Sturmev, W. - - - -	3806	Sep. 20	Locks and making same.
Bedford, A. (Swett, Sheldon, & Squire)	23	Jan. 3	Air-pistols.
Bedford, H., & Yates, T. E. & H. -	2459	June 14	Card-setting machines.
" J. - - - - -	103	Jan. 8	Cleaning grain; bolting flour; separating, &c. [middlings.
Bedwell, F. Le B. - - - - -	367	Jan. 29	Connecting telegraph cables with ships, &c.
Beecher, E. B. (Lake) - - - - -	4293	Nov. 6	Framing match-splints for dipping.
" E. F., Armstrong, A. P., [Thiers, W. F., & Jeffers, M. C. (Mills).	3585	Sep. 13	Ventilating, disinfecting and fog-alarm appa- [ratus for ships, &c
Beedell, E. C. - - - - -	702	Feb. 19	Date apparatus for stock-brokers, &c.
Beeley, T., & Muir, A. - - - - -	318	Jan. 26	Metal plates, bars, and rings.
Beer, B. (Piepers & Co.) - - - - -	4041	Oct. 19	Drawing or depicting objects, &c.
Beers, W., Pray, J. F. & B. S., & John- [son, D. A. (Lake).	3652	Sep. 18	Axles and axle-boxes.
Beesley, G. - - - - -	5011	Dec. 28	Applying steam, &c. in locomotive and marine [engines.
Behr, F. & Lippert, E. W. (Morgan- [Brown).	2050	May 16	Self-closing valves.
Beissel, C. (Abel) - - - - -	3488	Sep. 5	Motor-engines worked by steam, &c.
" C. (Abel) - - - - -	5042	Dec. 29	Motor-engines worked by steam, &c.
Bejar, y O'Lawlor, L. de, & Calvo, N. A.	1303	Mar. 27	Electric-telegraphy.
Beldam, A. - - - - -	2254	May 29	Packing for stuffing-boxes.
Bélicard, J. - - - - -	1753	Apr. 26	Cutting piled fabrics.
Bell, A. G. (Morgan-Brown) - - - -	4765	Dec. 9	Electric-telephony or sound telegraphs.
Bell, J. B. - - - - -	4739	Dec. 7	Mills in which stones are employed.
" F. J. - - - - -	3130	Aug. 5	Applying bodily weight, &c. to driving pur- [poses.
" H. - - - - -	3180	Aug. 11	Corn-mills.
" J. - - - - -	4925	Dec. 20	Heating and cooking-apparatus.
" J. M., & Rimington, J. McN., [& Branson, J. L.	3415	Aug. 30	Knitting-machinery.
Belleville, J. F. - - - - -	4428	Nov. 16	Inexplosive steam-generator.
Bellotti, S., & De Choch, Count G. -	821	Feb. 28	Mending or fishing shafts, axles, &c.
Bender & Huppe (Wirth) - - - - -	3273	Aug. 21	Fastening frames on bags.
Bendiger, J., Dussaud, P. J. & J., & [Duchez, J. (Hunt).	1839	May 2	Tanning.
Bennet, J. F. - - - - -	2032	May 15	Electrical commutator.
Bennett, E. - - - - -	4993	Dec. 23	Apparatus or dress for receiving discharge from [human body.
" F. G. - - - - -	1305	Mar. 27	Roller skate.
" J. - - - - -	3589	Sep. 13	Instrument for teaching billiards.
" J. J. - - - - -	3414	Aug. 30	Ferrules for umbrellas and walking-sticks.
" R. - - - - -	2804	July 10	Scouring needles and knitting-pins.
" R. - - - - -	3057	July 29	Finishing needles.
" R. - - - - -	4737	Dec. 7	Needles.
Benson, C., & Elston, S. S. - - - -	2871	July 13	Envelopes used in making oil-cake.
" G. - - - - -	2648	June 27	Veining, hem-stitching, and embroidering.
" M. (Cope & Maxwell) - - - - -	629	Feb. 16	Steam-pump valves.
" W. - - - - -	1838	May 2	Spinning and doubling.
" W., & Hickton, H. - - - - -	2830	July 11	Jacquard frames.
Benstead, T. - - - - -	102	Jan. 8	Reaping-machines.
" T., & Greig, D. - - - - -	2789	July 8	Reaping-machines.
Bent, S. (Lake) - - - - -	642	Feb. 16	Mariners' compasses.
" W. T., & Rice, I. L. G. (Hen- [derson).	3518	Sep. 7	Winding, &c. yarn on to bobbins and holding [ends of same in doffing.
Bentham, H. W. - - - - -	1460	Apr. 5	Clipping or shearing sheep.
Bentley, D. - - - - -	2340	June 3	Motive-power.

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Ber, O.	3371	Aug. 28	Automatic apparatus for shutting cocks.
Beresford, H., & Mullin, J.	1365	Mar. 31	Mules.
Berger, E. A.	4019	Oct. 18	Cricket-bats.
Berghe, P. L. Van den (Mills)	911	Mar. 3	Casting metals under pressure.
Bergman, H. (Brewer)	2167	May 22	Fish-plates for rails.
" H. (Brewer)	4146	Oct. 25	Fish-plates for rails.
Berly, J. A. (Plateau)	4320	Dec. 13	Pocket-book portable ink.
Bermueller, J., & Kluge, J. (Lake)	3668	Sep. 19	Combining confectionery with musical instruments.
Bernard, J.	1698	Apr. 21	Carts and waggons.
Bernau, R., & Sommer, G. O. A. (Sanders & Sanders).	1942	May 9	Furnaces.
" R., & Sommer, G. O. A. (Sanders & Sanders).	2222	May 26	Puddling furnaces.
Bernhard, I. (Spence)	4410	Nov. '14	An antitartaric lubricant.
Bernstein, A. (Newton)	1351	Mar. 29	Assorting coin.
" A. (von Nawrocki)	4981	Dec. 23	Scales for testing coins by weight.
Berry, B.	3144	Aug. 9	Weaving.
" B.	4662	Dec. 23	Looms.
" B., Emsley, S., & Smith, S.	343	Jan. 28	Spinning.
" T.	698	Feb. 19	Warping-machines.
Berryman, R.	1966	May 10	Heating water, air, &c.; condensers.
Berteaux, G. E., Sheraton, A. B., & Whelpley, J. A. (Thompson).	1262	Mar. 24	Skates.
Bertin, alias Bertin-Badoureau, L. [(Clark).	355	Jan. 28	Hardening wood.
Bertin-Badoureau alias Bertin, L. [(Clark).	355	Jan. 28	Hardening wood.
Bertram, J.	3922	Oct. 10	Cigar-ash boxes for railway carriages.
" L. B.	1209	Mar. 21	Wheel or roller skates.
Beard, J. L.	2774	July 7	Stoppering bottles or jars.
Besson, P., & Brüll, A. (Imray)	5016	Dec. 28	Material of cork and fibrous pulp.
Best, I., & Whitehead, H. W.	1643	Apr. 19	Fly combs of carding-engines.
" S. C.	1666	Apr. 20	Railway points or switches.
Betley, R., & Wolff, J.	44	Jan. 4	Colouring matters for dyeing, &c.
" R., & Wolff, J.	313	Jan. 26	Aniline dyes.
Betteley, J. H.	4669	Dec. 2	Railway and like bolts and nuts.
Betzold, G. (Rosenbaum)	744	Feb. 23	Colours for printing, dyeing, &c.
Beugger, J. (Dann)	4369	Nov. 13	Levelling rails of railways.
Bevington, T.	1490	Apr. 7	Gloves.
Bevis, W.	507	Feb. 8	Roller skates.
Bew, W.	639	Feb. 16	Piled fabrics.
Beyfus, L., Picking, G. G., Hopkins, W., & Haden, P.	361	Jan. 29	Raising sunken vessels.
Bezer, H.	333	Jan. 27	Turnstiles and counting apparatus.
" H.	1413	Apr. 1	Roller skates.
" H.	2218	May 26	Recording passage of vehicles.
" H.	3536	Sep. 8	Registering turnstiles.
" H.	3805	Sep. 30	Direction indicator for skating rinks.
Biard, E. G. (Brewer)	3141	Aug. 8	Raising, &c. weights; fire-escapes.
" G. E. (Brewer)	3786	Sep. 28	Fire-engines and pumps.
Bickerdike, W. E., & Bowdler, A. C.	2928	July 18	Varnish.
Biddell, G. A.	644	Feb. 16	Portable engines and boilers.
" G. A.	2425	June 12	Cork-screws.
Bidder, S. P.	3017	July 26	Electric-telegraphs.
Bierce, W. W. (Lake)	4157	Oct. 26	Postage and similar stamps.
Biermanns, L. (Foerste)	3051	July 29	Albums.
Bigelow, J. (Morgan-Brown)	666	Feb. 17	Uniting edges of knit goods, &c.
" J. (Morgan-Brown)	1327	Mar. 28	Seams or gorings for shoes, &c.
Bigg, H. H., & Kisingbury, S.	1744	Apr. 25	Roller skates.
Biggin, J.	2639	June 27	Dressing and skinning animals.
Biggs, J. H. W.	4324	Nov. 8	Evaporating brine and obtaining salt.
" T.	4647	Nov. 30	Boot and shoe cleaning machines.

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<i>Bigler, C. S., McPherson, J. B., & [Gilbert, L. De H. (Lake).</i>	883	Mar. 1	Brick-making.
<i>Billet, A.</i>	1320	Mar. 28	Printing-telegraphs.
<i>Bing, L.</i>	1634	Apr. 19	Harness attachment for horses.
<i>Binko, H. B.</i>	1418	Apr. 1	Bottle with movable bottom.
<i>Binns, C. F., & R. W.</i>	4152	Oct. 26	Heating pottery kilns or ovens.
<i>" L.</i>	4057	Oct. 20	Making cords and ropes.
<i>" R. W., & C. F.</i>	4152	Oct. 26	Heating pottery kilns or ovens.
<i>Bintley, J. T.</i>	1340	Mar. 29	Watch and clock cases.
<i>Birch, J. S. (Morgan)</i>	2892	July 14	Watch-keys.
<i>Birch, W.</i>	4031	Oct. 18	Squeezing-machines.
<i>Birchall, J. T.</i>	2914	July 17	Indicating horse-power &c. of engines.
<i>Bird, F. J. (Davis)</i>	4147	Oct. 25	Elevators.
<i>" F. J. (Poole)</i>	4188	Oct. 28	Can and metallic case openers.
<i>" F. J. (Maxim)</i>	4518	Nov. 21	Reversing valve-motion for steam-engines.
<i>" F. J. & Coleman, E. J. (Poole)</i>	2799	July 8	Spring "traveller" for ships.
<i>" F. J. & Coleman, E. J. (Poole)</i>	2800	July 8	Hooks or couplings.
<i>" F. J. & Coleman, E. J. (Pye)</i>	2801	July 8	Reaping and mowing machines.
<i>Birkett, T.</i>	4477	Nov. 18	Taps and cocks.
<i>Birnbacher Kunz & Co., & Thowenin, [L. (Michaelson).</i>	994	Mar. 8	Artificial grinding stone.
<i>Birtwisle, R., Wilkinson, J., & Hardman, J.</i>	5065	Dec. 30	Burnishing photographs.
<i>Bischof, C. T. (Bonneville).</i>	1570	Apr. 13	Rolling and cutting paper.
<i>Bischof, G.</i>	2080	May 17	Purifying water and sewage.
<i>Bishop, C. K. K.</i>	3210	Aug. 15	Organs.
<i>" W.</i>	1129	Mar. 16	Cleaning wool or woollen textures.
<i>Bisset, T. S.</i>	1685	Apr. 21	Digging or lifting potatoes.
<i>Black, P.</i>	4275	Nov. 6	Railway and tramway wheels.
<i>" T.</i>	1092	Mar. 13	Equilibrium cabins for ships.
<i>" T.</i>	1632	Apr. 19	Steam-boilers.
<i>" T.</i>	1713	Apr. 22	Steam-engines.
<i>" T.</i>	4016	Oct. 18	Safety-valve.
<i>Blackburn, T.</i>	606	Feb. 14	Securing ends of driving-bands.
<i>" T., & Haydock, J.</i>	3697	Sep. 21	Knitting healds.
<i>" W., & Shaw, T.</i>	4482	Nov. 20	Measuring and drawing off liquids.
<i>" W., & Shaw, T.</i>	4979	Dec. 23	Measuring and drawing off liquids.
<i>Blackie, J. K., & Robertson, J.</i>	1740	Apr. 25	Service cisterns and valves.
<i>Blackley, J.</i>	2540	June 19	Retaining window-sashes in position.
<i>Blackman, A. L., & Bowron, J. (Bowron)</i>	248	Jan. 21	Wheels for machinery, railways, &c.
<i>Blain, J. C.</i>	3004	July 25	Rotary air-engine.
<i>Blair, A. & J.</i>	93	Jan. 8	Clipping lappets.
<i>" J. & A.</i>	93	Jan. 8	Clipping lappets.
<i>Blair, T. S. (Ireland)</i>	2677	June 29	Reducing oxide ores of iron, &c.
<i>" T. S. (Ireland)</i>	4520	Nov. 21	Reducing metallic ores.
<i>" T. S., & Ireland, J.</i>	4958	Dec. 22	Reducing metallic ores.
<i>Blaisdell, G. D. (Haddan)</i>	3350	Aug. 26	Railroad-ties.
<i>Blake, A.</i>	1714	Apr. 22	Treating malt, &c. for brewing.
<i>" J.</i>	4364	Nov. 11	Valves for reducing and regulating pressure.
<i>Blake, L. R. (Lake)</i>	4082	Oct. 21	Pasting, cutting, &c. edges of shoe vamps.
<i>Blake, W., & Tebbs, R.</i>	4299	Nov. 7	Flower-pots.
<i>Blakey, J.</i>	1638	Apr. 19	Building and fixing boot-heels.
<i>" J.</i>	4599	Nov. 28	Boots, shoes, and clogs.
<i>" R., & Hargreaves, B.</i>	116	Jan. 11	Washing and wringing machines.
<i>Blamires, T. H.</i>	2472	June 14	Opening & closing taps, valves, ventilators, &c.
<i>" T. H.</i>	4816	Dec. 13	Opening & closing taps, valves, ventilators, &c.
<i>Blamphin, J. N.</i>	3058	July 31	Perambulators.
<i>Blancke, C. W. J., & Fricke, E. (Dorrendorff).</i>	2562	June 21	Engine-counters; registering, &c.
<i>Bland, M. H.</i>	2779	July 7	Diving apparatus.
<i>Blass, E., & Ireland, W.</i>	3211	Aug. 15	Treating iron and steel for cleansing, coating, [annealing, &c

Name.	Number of Application.	Date of Application.	Subject.
<i>Bled, A. du, & Dujardin, C.</i> (Haddan)	2964	July 21	Waterproofing substances.
Blewitt, R. J. - - - - -	876	Mar. 1	Gas-making; applying products.
Blinkhorn, T., & Browning, B. - -	1902	May 5	Slide-valves.
Bliss, W. H. - - - - -	1617	Apr. 18	Roller skates and wheels.
" W. H. - - - - -	4665	Dec. 2	Raising sunken ships or vessels.
<i>Bloch, L. H.</i> (Steenberg) - - - -	3327	Aug. 24	Advertising playing cards.
Blogg, W. G. - - - - -	4012	Oct. 17	Locks.
Blood, W. B. - - - - -	4250	Nov. 3	Tricycles.
Bloomfield, J. C. - - - - -	3447	Sep. 1	Bricks, tiles, and slabs.
Blott, W. - - - - -	2508	June 16	Attachments for life-saving and other rockets, [and connecting same.]
Bluemel, C. A. - - - - -	2517	June 17	Graining, coating, &c. wood.
Blundell, G. T. & J. W. - - - - -	809	Feb. 26	Lavatories.
" G. T. & J. W., & Holmes, F. - -	3763	Sep. 27	Pumps.
" J. W. & G. T. - - - - -	809	Feb. 26	Lavatories.
" J. W. & G. T., & Holmes, F. - -	3763	Sep. 27	Pumps.
Blunn, H. A. - - - - -	1775	Apr. 27	Glass furnaces.
<i>Blüthner, J.</i> (Wirth) - - - - -	1124	Mar. 15	Pianos.
<i>Blythe, J. B.</i> (Hughes) - - - - -	2651	June 27	Preserving wood and vegetable fibre.
<i>Boardman, E. P.</i> (Lake) - - - - -	445	Feb. 3	Revolving pistols.
Boby, W., Lilley, J., Adams, E. C., [& Browne, S. G. - - - - -	964	Mar. 6	Hydraulic elevator.
<i>Boccard & Perrier</i> (Browne) - - -	4442	Nov. 16	Motors for sewing-machines, &c.
Boddington, H. - - - - -	3521	Sep. 7	Rousing fermenting liquors.
<i>Bodemer, J. G.</i> (Pieper) - - - - -	1779	Apr. 27	Indirect-acting governors.
" J. G. (Pieper) - - - - -	4491	Nov. 20	Cleaning cylinders of spinning machines.
Boegel, C. (Gill) - - - - -	2778	July 7	Sugar-making.
<i>Boeringer, E.</i> (Clark) - - - - -	3473	Sep. 2	Printing woven and other fabrics.
Boggett, W. - - - - -	4720	Dec. 6	Foundations for street paving.
" W., & Macintosh, J. M. - - -	908	Mar. 3	Air-proof articles.
" W., & Macintosh, J. M. - - -	3783	Sep. 28	Air or water-proof articles.
Bohne, C. - - - - -	148	Jan. 14	Levelling and measuring angles.
<i>Bohrer, W.</i> (Bousfield) - - - - -	1156	Mar. 17	Hand-rests for pianos.
Boisseau, P. F. - - - - -	502	Feb. 8	Inspecting & cleansing submerged structures
Bollé, C. F. H. - - - - -	4829	Dec. 14	Safety or escape valves.
<i>Bollenbacher, G. W.</i> (Haddan) - -	1981	May 11	Kitchen safes.
<i>Bollmann, L.</i> (Budenberg) - - - -	219	Jan. 19	Emery wheel grinders.
" L. (Lake) - - - - -	4270	Nov. 4	Cutting screws or other articles.
Bolt, J. - - - - -	164	Jan. 15	Stoppers for bottles, flasks, &c.
" J., & Weeder, J. - - - - -	905	Mar. 3	Bottle-stoppers.
" J., Weeder, W., & Whitehead, W. -	2203	May 25	Spoons.
Bolton, F. J., Beaumont, F. E. B., [& Ashwell, W. H. - - - - -	3277	Aug. 21	Making and utilising slag castings.
Rombart, J. C., & Baudoin, J. - - -	3442	Sep. 1	Stenographing apparatus.
<i>Bomeisler, E. L., & Robinson, R. M.</i> [(Richards). - - - - -	3971	Oct. 14	Anchors.
Bomford, E. G. C. - - - - -	3251	Aug. 18	Training or growing hops.
" E. G. C., & King, H. J. H. - - -	1112	Mar. 15	Reaping and binding crops.
Bond, F. T. - - - - -	181	Jan. 18	Filtering and purifying water, &c.
" F. T. - - - - -	2747	July 5	Filtering and purifying water, &c.
" F. T. - - - - -	4751	Dec. 8	Producing sulphurous acid gas.
" F. T. - - - - -	4752	Dec. 8	Ventilating and heating buildings.
Bondi, C. - - - - -	128	Jan. 12	Signalling, &c. on railways and tramways.
Bone, F. G. - - - - -	1111	Mar. 15	Steam-boilers.
Bonneville, H. A. (Maitre) - - - -	532	Feb. 10	Mode of flooring.
" H. A. (Thomas) - - - - -	533	Feb. 10	Treating zinc ores, &c.
" H. A. (De Carvalho) - - - - -	653	Feb. 17	Electro-dynamic apparatus.
" H. A. (Bischof) - - - - -	1570	Apr. 13	Rolling and cutting paper.
" H. A. (Viscount de Romanet) - -	1721	Apr. 24	Glazing, &c. walls, and compositions for same.
" H. A. (Seymour) - - - - -	2051	May 16	Cleansing ships' bottoms.
" H. A. (Bathias) - - - - -	2531	June 19	Registering speed of machinery.
" H. A. (Terry) - - - - -	3112	Aug. 4	Elevators for buildings.

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Bonneville, H. A. (Hill) - - - -	3438	Aug. 31	Musical instruments.
" H. A. (Moselli) - - - -	4278	Nov. 6	Fire-arms.
" H. A. (Edgar & Bardell) - - -	4732	Dec. 7	Frying-pans.
" H. A. (Lorthioir) - - - -	4997	Dec. 27	Varnish.
Bonninière, E. H. de la Vicomte de [Beaumont (Johnson).]	3451	Sep. 1	Vaults or arches and ventilating, &c. same.
Bonta, J. W. - - - - -	3098	Aug. 3	Steam-boiler furnaces.
" J. W. - - - - -	3104	Aug. 3	Smokeless furnaces.
Bontigny, A. A. (Gedge) - - - -	4059	Oct. 20	Boots and shoes.
Bonton, C. A. - - - - -	3430	Aug. 31	Air-brakes; motive-power engines.
" C. A. - - - - -	3981	Oct. 14	Air-brakes; motive-power engines.
Bonwick, W. P. - - - - -	3284	Aug. 21	Velocipede.
Boomer, O. F., & Randall, H. R. (Lake)	4995	Dec. 26	Malt syrup or extract.
Booth, F. W., & Holcroft, G. - -	1029	Mar. 9	Furnaces; retorts; crucibles.
Boothman, J., & Firth, A. F. - -	3068	July 31	Looms.
Borgfeldt, N. H. (Clark) - - - -	879	Mar. 1	Life-rafts.
Borgnet, C., & Demanet, C. (Murdoch)	880	Feb. 29	Combustion of solids, gases, &c.
Borfeldt, C. (Wirth) - - - - -	2873	July 13	Silk hats.
Borzecki, C. - - - - -	57	Jan. 6	Perpetual motion.
Bosworth, J. A. - - - - -	1295	Mar. 25	Moulding bricks, &c.
Bottomley, J., & Smith, S. - - -	4253	Nov. 3	Spinning and doubling.
Bouchacourt, et Cie., & Delille, A. [Clark].	2702	June 30	Screw-threading rods, bolts, &c.
Bouchardat, G., Girard, C., & Willm, E.	4839	Dec. 14	Obtaining colouring matters.
Boucher, A. E. M. (Newton) - - -	4310	Nov. 7	Substitute for the slide-rule.
Boughtwood, T. O., & Capon, G. G. -	51	Jan. 5	Securing wine and other cases.
Bouilhet, H. C., & Christoffe, H. A. P. [Johnson].	2519	June 17	Treating ores containing nickel.
Boulieu Bros. & Charlon (Brewer) -	4552	Nov. 23	Centrifugal drying machines.
Boulton, A. - - - - -	1285	Mar. 25	Making tacks or cut nails.
" M. P. W. - - - - -	1108	Mar. 15	Producing heat; generating gases.
" M. P. W. - - - - -	2288	May 31	Generating fluid for working engines.
" M. P. W. - - - - -	3620	Sep. 15	Gas-engines.
" M. P. W. - - - - -	3787	Sep. 27	Motive-power.
Bourgeois, B. (Chaninel) - - - -	3832	Oct. 3	Ladies bow or cravat fasteners.
Bourguet, M. P. (Redfern) - - - -	2035	May 15	Folding chair or seat.
Bourquin, C. A. & Van-Heers, G. T. [Clark].	3607	Sep. 14	Producing illuminated advertisements.
Boursot, A. - - - - -	607	Feb. 15	Rink skates.
Bouscaren, L. F. G. (Mills) - - -	1824	May 1	Extracting vegetable juices.
Bousfield, E. T. - - - - -	4827	Dec. 13	Horse-rakes.
" E. T., & Howard, J. - - - -	1429	Apr. 3	Tilling implements.
" E. T., & Howard, J. - - - -	1586	Apr. 13	Harvesting-machines.
" G. T. (Archinard & Socin) - - -	421	Feb. 2	Preserving telegraph posts.
" G. T. (Bohrer) - - - - -	1156	Mar. 17	Hand-rests for pianos.
" G. T. (Ferrando-Morel) - - - -	1691	Apr. 21	Sawing timber.
" G. T. (Gray) - - - - -	1874	May 4	Telegraphing and analysing musical sounds.
Boutet, T. C. - - - - -	4708	Dec. 5	Aéro-hydrostatic motive-power engines.
Boutherin, C. F. (Büschel) - - -	4796	Dec. 11	Winding braid, ribbon, lace, &c.
Bovenschen, C. (Langgaard) - - -	2043	May 15	Stoppering bottles.
Bowden, E. T. - - - - -	2469	June 14	Tea and coffee pots.
Bowdler, A. C., & Bickerdike, W. E. -	2928	July 18	Varnish.
Bowen, A., & Stiff, W. C. - - - -	3845	Oct. 4	Making screws.
Bowen, F. A., & Redfield, G. S. (Lake)	726	Feb. 22	Ore separators.
Bowen, T. - - - - -	1680	Apr. 21	Sulphuric acid.
Bowker, W. - - - - -	2787	July 8	Screwing; cutting tubes; tapping nuts.
" W. - - - - -	3146	Aug. 9	Boiler-tube ferrule extractor.
" W. - - - - -	3147	Aug. 9	Discharge or blow-off cock.
Bowles, G., & Hambling, R. - - -	814	Feb. 26	Roller skates.
Bowman, H. - - - - -	4336	Nov. 9	Propulsion of double vessels.
" J. - - - - -	4383	Nov. 11	Cleaning tramway or other rails.
" T. J. - - - - -	2877	July 14	Ventilating hats.
" W., & Macadam, J. W. - - -	1644	Apr. 19	Sash-bars for greenhouses, &c.

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<i>Bowman, W. K., & Smith, B. F. (Lake)</i>	4043	Oct. 19	Catching fish or game.
<i>Bown, W.</i>	3266	Aug. 19	Wheels or rollers for roller skates, &c.
" <i>W.</i>	3617	Oct. 2	Sewing-machine shuttles.
<i>Bowra, M. E., & Zeden, A. H. A. .</i>	3747	Sep. 26	Elastic materials for boots, bands, gloves, [sheets, &c.
<i>Bowron, J. (Bowron & Blackman) .</i>	248	Jan. 21	Wheels for machinery, railways, &c.
<i>Bowron, J., & Blackman, A. L. .</i>	248	Jan. 21	Wheels for machinery, railways, &c.
" <i>W. L., & Vogel, J. B. (Clark)</i>	2937	July 18	Decorticating china-grass.
<i>Box, W.</i>	1994	May 12	Road-locomotives or traction-engines.
<i>Boyce, C.</i>	1848	May 2	Anchors.
<i>Boyden, O. W., & Burt, E. C. & F. B. [(Clark).]</i>	2290	May 31	Cigar-lighters.
<i>Boyes, W.</i>	4180	Oct. 28	Purifying and heating water.
<i>Boyle, R.</i>	3	Jan. 1	Boiler furnaces of and ventilating, &c. steam [ships.
<i>Bozérian, G. E. E. (De Pass) . . .</i>	4102	Oct. 23	Motive-power.
<i>Bradbury, W.</i>	2361	June 6	Looms.
<i>Braddock, J. & J.</i>	2455	June 14	Governors or fluid regulators.
<i>Bradford, T.</i>	2999	July 25	Washing and peeling potatoes, &c.
<i>Bradley, C., & Campbell, J. . . .</i>	4252	Nov. 3	Combing fibres.
" <i>E. & H., & Sunderland, W. . .</i>	1116	Mar. 15	Economising fuel and consuming smoke.
" <i>H. & E., & Sunderland, W. . .</i>	1116	Mar. 15	Economising fuel and consuming smoke.
<i>Bradley, E. D. (Clark)</i>	4398	Nov. 11	Generating, &c. gas for motive-power.
" <i>R. F. (Clark)</i>	1145	Mar. 16	Ocean station for telegraphs.
<i>Bradshaw, A., & Barff, A.</i>	1923	May 8	Steam-traps.
" <i>C. W.</i>	634	Feb. 16	Skating rink.
<i>Braidwood, J. H.</i>	4532	Nov. 22	Making wheel-tyres and other rings.
<i>Braidwood, W., & Francis, L. (Marler)</i>	3982	Oct. 14	Paper-folding machinery.
" <i>W., Francis, L., & Loutrel, [(C. H. (Marler).]</i>	4351	Nov. 10	Perforating paper, &c.
<i>Brailsford, T. R.</i>	3343	Aug. 25	Railway and tramway carriages.
<i>Braithwaite, W.</i>	4535	Nov. 22	Compensating the expansion and contraction [of signal wires.
<i>Brake Co., Empire Vacuum (Johnson)</i>	1538	Apr. 11	Air-brakes and ejectors.
<i>Bramall, H.</i>	2974	July 22	Bessemer steel converters.
<i>Bramwell, R.</i>	4867	Dec. 16	Oil-cans.
" <i>S., & Pollard, W.</i>	1816	May 1	Doubling yarns.
<i>Bramwell, W. C. (Clark),</i>	1144	Mar. 16	Carding-machines.
<i>Brandt, A. (Johnson)</i>	425	Feb. 2	Boring rock.
" <i>A. (Lake)</i>	4682	Dec. 4	Boring or working rock or other material.
" <i>J., & von Nawrocki, G. W. [(Jensen).]</i>	1810	Apr. 29	Galvanic-batteries.
<i>Brandtner, C. (Clark)</i>	536	Feb. 10	Treadle mechanism.
<i>Branson, J. L., Rimington, J. Mc. N., [& Bell, J. M.]</i>	3415	Aug. 30	Knitting-machinery.
<i>Brauer, B. (Haddan)</i>	4141	Oct. 25	Rotary-engines.
<i>Brauer, E.</i>	4342	Nov. 9	Friction-gearing.
<i>Braun, O. (Low)</i>	803	Feb. 26	Roller skate.
" <i>O. (Low)</i>	815	Feb. 28	Artificial ice rink.
<i>Braunfeld, R.</i>	2148	May 20	Metal boxes, cases, &c. and fastening same.
<i>Bray, G.</i>	940	Mar. 4	Gas-burners.
" <i>G.</i>	1189	Mar. 20	Cutting or turning wood.
" <i>G.</i>	3663	Sep. 19	Cutting, turning, or shaping wood.
" <i>H.</i>	562	Feb. 11	Gas-making.
<i>Brayton, G. B. (Lake)</i>	4422	Nov. 15	Pistons of air and gas engines.
<i>Breffit, E., & Neville, T.</i>	791	Feb. 25	Bottle-stoppers.
" <i>E., & Edwards, J.</i>	1025	Mar. 9	Bottle-stoppers, filling, &c. bottles.
" <i>E., & Edwards, J.</i>	4339	Nov. 9	Bottle-stoppers.
<i>Bresson, A.</i>	1833	May 2	Railway river bridge.
<i>Bret, B. Le (Gedge)</i>	62	Jan. 6	Signalling on trains.
<i>Bréton, E. M. J. Le</i>	8	Jan. 1	Motive-power.
<i>Brevig, J. (Steenberg)</i>	4493	Nov. 20	Discovering leakage in ships.

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Brewer, E. G. (<i>Juvenal & Gravot</i>) -	61	Jan. 6	Floating and submerged ships and propelling [same.
" E. G. (<i>Marsh</i>) - - - -	146	Jan. 13	Sails of vessels.
" E. G. (<i>Chanel</i>) - - - -	160	Jan. 14	Preserving food, &c.
" E. G. (<i>Quinquarlet-Dupont</i>) -	204	Jan. 19	Sewing hosiery, &c.
" E. G. (<i>Segoffin</i>) - - - -	554	Feb. 11	Cases for toilet articles.
" E. G. (<i>Gerard</i>) - - - -	758	Feb. 23	Cutting fabrics, &c.
" E. G. (<i>Cacheleux</i>) - - - -	775	Feb. 24	Depositing, &c. mail-bags in trains.
" E. G. (<i>Morris</i>) - - - -	796	Feb. 25	Pump.
" E. G. (<i>Hennessy</i>) - - - -	835	Feb. 28	Safe time locks.
" E. G. (<i>Loeb</i>) - - - -	1238	Mar. 23	Enabling persons to enter smoke-filled places
" E. G. (<i>Endrès</i>) - - - -	1493	Apr. 7	Roller or rink skates.
" E. G. (<i>Kirkham</i>) - - - -	1712	Apr. 22	Umbrellas and parasols.
" E. G. (<i>Marquet</i>) - - - -	1809	Apr. 29	Closing preserved provision cases.
" E. G. (<i>Vitrant</i>) - - - -	1932	May 8	Looms.
" E. G. (<i>Bergman</i>) - - - -	2167	May 22	Fish-plates for rails.
" E. G. (<i>Sabate</i>) - - - -	2175	May 23	Glove for horticultural purposes, &c., and [cleaning coats of animals.
" E. G. (<i>Woolnough & Dehne</i>) -	2456	June 14	Moulding.
" E. G. (<i>Daudier et fils</i>) - -	2505	June 16	Bleaching and purifying wool.
" E. G. (<i>von Otter</i>) - - - -	2921	July 17	Signalling and telegraphing from ships, &c.
" E. G. (<i>von Otter</i>) - - - -	2931	July 18	Signalling.
" E. G. (<i>Admant & Durand</i>) -	2955	July 20	Rink or roller skates.
" E. G. (<i>Gavioli & Co.</i>) - -	3013	July 26	Organ pipes or tubes.
" E. G. (<i>Biard</i>) - - - -	3141	Aug. 8	Raising, &c. weights; fire-escapes.
" E. G. (<i>Guy</i>) - - - -	3217	Aug. 15	Printing-machines.
" E. G. (<i>Facio</i>) - - - -	3462	Sep. 2	Obtaining light by electricity.
" E. G. (<i>Lauritzen</i>) - - - -	3537	Sep. 8	Telegraphic receiving instruments.
" E. G. (<i>Biard</i>) - - - -	3786	Sep. 28	Fire-engines and pumps.
" E. G. (<i>Bergman</i>) - - - -	4146	Oct. 25	Fish-plates for rails.
" E. G. (<i>Boulieu Bros., & [Charlon).</i>	4552	Nov. 23	Centrifugal drying machines.
" E. G. (<i>Faure</i>) - - - -	4812	Dec. 13	Checking and registering fares in vehicles.
" R. T. & W. - - - -	3961	Oct. 13	Impressing, ornamenting and polishing leather, [cloth, skin, &c.
" W. & R. T. - - - -	3961	Oct. 13	Impressing, ornamenting and polishing leather, [cloth, skin, &c.
Brewster, C. (<i>Haddan</i>) - - - -	1126	Mar. 16	Skate attachments.
Brewster, J., & Mace, C. - - - -	2721	July 1	Consuming smoke, &c. in boiler furnaces.
Brice, W. A. - - - -	3417	Aug. 30	Photographic test-plate or actinometer.
" W. A. - - - -	3432	Aug. 31	Detaching or disengaging ships' boats, &c.
" W. A. - - - -	3608	Sep. 14	Fountain pen-holder.
" W. A. - - - -	3658	Sep. 19	Detaching and disengaging ships' boats.
" W. A. - - - -	3765	Sep. 27	Advertising money boxes or tills.
" W. A. - - - -	4946	Dec. 22	Boat-lowering apparatus.
Brice, W. A. (<i>Clark</i>) - - - -	1050	Mar. 10	Photographic apparatus.
Bricknell, A. L., & Hall, A. A. (<i>Jensen</i>)	4331	Nov. 9	Cast metal pulleys and making same.
Bridges, R. - - - -	4877	Dec. 18	Collecting, &c. residue from thrashing and [similar machines.
Bridgett, G. A., & Crossley, F. W. -	989	Mar. 7	Steam or other fluid pumps.
Brière, J. - - - -	877	Mar. 1	Feeding-bottle.
Brierley, F. W., W. W. & J. - - -	1067	Mar. 11	Railway signals.
Brierley, F. W., & Brierley, J. & [W. W.	3457	Sep. 1	Working railway locking-bolts, switches, &c.
" F. W., & Brierley, J & [W. W.	3701	Sep. 21	Working &c. railway points and signals.
Brierley, J., & McCraith, H. - - -	1254	Mar. 24	Bottles and stoppers.
" J., F. W. & W. W. - - -	1067	Mar. 11	Railway signals.
" J. & W. W., & Brierley, F. W.	3457	Sep. 1	Working railway locking-bolts, switches, &c.
" J. & W. W., & Brierley, F. W.	3701	Sep. 21	Working, &c. railway points and signals.
" J. H. - - - -	4810	Dec. 13	Braces.
" W. W., J. & F. W. - - -	1067	Mar. 11	Railway signals.

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Brierley, W. W. & J., & Brierley, F. W.	3457	Sep. 1	Working railway locking-bolts, switches, &c.
" W. W. & J., & Brierley, F. W.	3701	Sep. 21	Working, &c. railway points and signals.
Briggs, A. L. - - - - -	3945	Oct. 12	Preparing fibres.
" R. B. - - - - -	3802	Sep. 29	Waterproof composition for boots, &c.
Bright, W. - - - - -	1935	May 9	Roller skates.
Brinjes, J. F. - - - - -	281	Jan. 25	Raising, forcing, &c. liquids and fluids
Brink, C. Ten (Johnson) - - - - -	3661	Sep. 19	Steam-boilers.
Brinsmead, H. - - - - -	2341	June 3	Carriages.
Briscoe, R. M., & Ormond, A. - - - - -	2557	June 20	Military saddles.
Brittain, H. - - - - -	3648	Sep. 18	Carriage windows and fastenings.
Britten, B. - - - - -	2105	May 18	Glass-making.
" J. - - - - -	4596	Nov. 28	Checking or preventing fraud.
Broad, J., & Claxton, W. B. - - - - -	1436	Apr. 4	Envelopes and wrappers.
Broadbent, H. & R. - - - - -	1473	Apr. 6	Breaking stone and ore.
" R. & H. - - - - -	1473	Apr. 6	Breaking stone and ore.
" T. - - - - -	4871	Dec. 16	Fireproof and other buildings.
Broadhead, J. - - - - -	442	Feb. 3	Jacquard apparatus.
Broadley, J., Lister, J., & Hodgson, G. - - - - -	3062	July 31	Looms.
Brochocki, Comte T. de D. - - - - -	4483	Nov. 20	Substitute for lye of javelle.
Brock, A. D. (Hunt) - - - - -	3091	Aug. 2	Steam-boilers.
Brock, C. - - - - -	2922	July 17	Imitation malachite, lapis lazuli, &c.
Brockelbank, T. A. - - - - -	2945	July 19	Railway couplings.
Brode, L. A. - - - - -	3686	Sep. 20	Artificial marble or stone.
Brodie, D. - - - - -	509	Feb. 8	Mashing grain; heating liquids.
Brodribb, W. A. - - - - -	4099	Oct. 23	Cleaning streets.
Bromley, W., Crowe, G., & James, W. - - - - -	4830	Dec. 14	Motive-power engines; pumps; water-meters.
Brook, E., & Wilson, A. - - - - -	1948	May 9	Gas-making.
" E., & Wilson, A. - - - - -	3949	Oct. 12	Gas-making.
" L. - - - - -	4771	Dec. 9	Cans for preserving beer or other liquids.
Brooke, A., Royle, T., & Simpson, R. - - - - -	1851	May 2	Alizarine, &c.
" E. - - - - -	4376	Nov. 11	Blocks or inverts for drains, &c.
" O. - - - - -	4966	Dec. 23	Roofing-felt.
Brooker, C. F. (Holmes) - - - - -	1426	Apr. 3	Gas-stoves.
Brookes, A. G. (Farjon) - - - - -	2963	July 21	Copying and other presses.
" H. J. - - - - -	4050	Oct. 19	Making metallic nuts.
" W. (Dubue) - - - - -	963	Mar. 6	Sewing-machines.
" W. (Sewell & Sweanor) - - - - -	2117	May 19	Fog-alarm.
" W. (Radde) - - - - -	2268	May 30	Printing in colours.
" W. (Farjon) - - - - -	2378	June 7	Taking samples of grain, sugar, &c.
" W. (Vandepoel) - - - - -	3752	Sep. 26	Padlocks.
Brookman, H. W. - - - - -	4560	Nov. 24	Convertible bedsteads.
Brooks, H. - - - - -	3683	Sep. 20	Action of upright pianos.
" H. - - - - -	4248	Nov. 3	Music stools and other seats.
" J., & Cooper, W. - - - - -	4268	Nov. 4	Anvils.
" S., & Harrison, G. - - - - -	4635	Nov. 30	Spinning and doubling.
Broscomb, J. H., & Walkington, R. - - - - -	2615	June 24	Preserving pencils, &c.
Brot, P. L. (Lake) - - - - -	348	Jan. 28	Mirrors or looking glasses.
Brotherhood, P. - - - - -	3164	Aug. 10	Compressing air, &c.
Brough, W., & Shephard, J. W. - - - - -	2404	June 9	Bathing dress and life-saving belt.
Browett, T., & Harrison, W. - - - - -	3700	Sep. 21	Bicycles and bicycle stands.
Brown, Brothers (Newton) - - - - -	2165	May 22	Table forks and spoons.
Brown, A., & Simons, W. - - - - -	4382	Nov. 11	Hopper dredgers.
" A. B. - - - - -	529	Feb. 10	Cutting and getting stone.
Brown, A. E., & Hennaman, J. T. (Mills) - - - - -	297	Jan. 25	Making cigars.
" C. (Haddan) - - - - -	3176	Aug. 11	Valves and gearing for same.
" Daniel (Cowell) - - - - -	3932	Oct. 11	Pressing or shaping hats.
Brown, David, & W., & Vaughan, W. W. - - - - -	690	Feb. 18	Unwelded tubes.
" E. - - - - -	4716	Dec. 6	Bedsteads and cots.
" E. & F. - - - - -	1832	May 1	Controlling and breaking in horses.
" E., & Rider, J. - - - - -	5039	Dec. 29	Composition for preventing freezing in engines, &c. and for lubricating same.
" Francis, - - - - -	2134	May 20	Dressing stone.

Name.	Number of Application.	Date of Application.	Subject.
Brown, Frederick, & E. - - - -	1832	May 1	Controlling and breaking in horses.
Brown, Frederick A., & Watkins, A. H. - - - -	5002	Dec. 27	Engraving, &c. jewellers' and silversmiths' [work.
[(Lake).			
Brown, H., & Perkins, T. - - - -	4706	Dec. 5	Cultivating or tilling land.
" H. H. - - - - -	1723	Apr. 24	Boot cleaning machine.
" Jacob - - - - -	4868	Dec. 16	Skates; securing same to the feet.
" James, & Cousins, C. - - - -	1094	Mar. 13	Locking railway points.
" James, & Cousins, C. - - - -	3352	Aug. 26	Locking railway facing points.
Brown, James A., Fergus, J., & Colket, - - - -	1352	Mar. 29	Injectors.
[(G. H. (Johnson).			
Brown, James Wallace - - - - -	2941	July 19	Electric-telegraphs.
" James Wallace, & Allan, G. - - - -	1757	Apr. 26	Electric-telegraphs.
" James Watts - - - - -	583	Feb. 12	Kitcheners and cooking-ranges.
" John, & Woodcock, H. - - - -	4134	Oct. 25	Mules.
" John, Dean, W., & Orrah, A. - - - -	1118	Mar. 15	Cutting pile fabrics.
" John, Dean, W., & Orrah, A. - - - -	4135	Oct. 25	Drawing, twisting, &c. fibres.
" John W., & McLintock, J. - - - -	559	Feb. 11	Roller skates.
Brown, Josiah (Deayman & Evans) - - - -	2277	May 30	Washing fabrics.
Brown, O. - - - - -	1199	Mar. 21	Signalling in trains.
" Richard, & Barnes, R. W. - - - -	2367	June 6	Photography.
" Robert - - - - -	2674	June 28	Candlesticks.
" S., Mather, S. H., & Ormesher, - - - -	3787	Sep. 28	Removing soot, &c. from steam-boiler flues.
[(J. & W.			
" S. O. - - - - -	277	Jan. 24	Wheel or roller skates.
" S. O. - - - - -	480	Feb. 5	Wheel or roller skates.
" S. Shaw - - - - -	4893	Dec. 19	Manufacture of lint.
" T. - - - - -	2052	May 16	Picks, axes, adzes, &c.
" W. & D., & Vaughan, W. W. - - - -	690	Feb. 18	Unwelded tubes.
" W. Morgan- (Matule) - - - -	58	Jan. 6	Indexing and binding books.
" W. Morgan- (Savage) - - - -	271	Jan. 24	Metallurgical furnaces.
" W. Morgan- (Simmons & Har- - - - -	311	Jan. 26	Cop-tubes
[(robin).			
" W. Morgan- (Bigelow) - - - -	666	Feb. 17	Uniting edges of knit goods, &c.
" W. Morgan- (Doty) - - - -	893	Mar. 2	Lamp-burners.
" W. Morgan- (du Laney) - - - -	1137	Mar. 16	Sewing-machines.
" W. Morgan- (Sainsbury) - - - -	1186	Mar. 20	Hardening wood.
" W. Morgan- (Drucker) - - - -	1239	Mar. 23	Braces or suspenders.
" W. Morgan- (Bigelow) - - - -	1327	Mar. 28	Seams or gorings for shoes, &c.
" W. Morgan- (Richardson) - - - -	1383	Mar. 31	Playing-cards.
" W. Morgan- (Johnson) - - - -	1563	Apr. 13	Locomotive-engines.
" W. Morgan- (Barlow) - - - -	1654	Apr. 20	Ornamental textile fabrics.
" W. Morgan- (Glisenti) - - - -	1671	Apr. 21	Fire-arms.
" W. Morgan- (Chanoit) - - - -	2000	May 12	Filtering reservoir.
" W. Morgan- (Durouze) - - - -	2001	May 12	Purifying turpentine spirit.
" W. Morgan- (Behr & Lippert) - - - -	2050	May 16	Self-closing valves.
" W. Morgan- (Hotchkiss) - - - -	2410	June 10	Metallic cartridges.
" W. Morgan- (Russell) - - - -	2426	June 12	Pasting labels on cans and boxes.
" W. Morgan- (Crowell) - - - -	2457	June 14	Folding and delivering paper.
" W. Morgan- (Glaçon) - - - -	2631	June 26	Wire-drawing apparatus.
" W. Morgan- (Chapman) - - - -	2883	July 14	Making envelopes.
" W. Morgan- (Hotchkiss) - - - -	2952	July 20	Projectiles for ordnance.
" W. Morgan- (de Torres) - - - -	2968	July 21	Injector for steam-boilers.
" W. Morgan- (Ducos-Duhau- - - - -	2973	July 22	Photography in colours.
[(ron).			
" W. Morgan- (Weare & Weare) - - - -	3137	Aug. 8	Cooking-utensils.
" W. Morgan- (Kunkler) - - - -	3243	Aug. 17	Varnishes and applying same.
" W. Morgan- (Koll) - - - -	3305	Aug. 23	Steam-boilers.
" W. Morgan- (Viglino & Donna) - - - -	3443	Sep. 1	Hydro-piro-pneumatic pump.
" W. Morgan- (Fouillet) - - - -	3659	Sep. 19	Looms for pleating and diapering cloth, &c.
" W. Morgan- (Mann) - - - -	3956	Oct. 13	Marine danger signal.
" W. Morgan- (Vanstone & - - - -	4010	Oct. 17	Blanks for screws and threaded nails.
[(Hoard).			

Name.	Number of Application.	Date of Application.	Subject.
Brown, W. Morgan- (<i>Hancock</i>) - -	4078	Oct. 21	Injectors or inspirators.
" W. Morgan- (<i>Maurel & Truel</i>) - -	4617	Nov. 29	Safety-valves.
" W. Morgan- (<i>Bell</i>) - - -	4765	Dec. 9	Electric telephony or sound telegraphs.
" W. Morgan- (<i>Sawyer</i>) - - -	4766	Dec. 9	Mules or jacks for spinning.
" W. Morgan- (<i>Hornbostel</i>) - -	5007	Dec. 28	Preparing, &c. oxygenated air for combustion.
" W. Morgan- (<i>Myers</i>) - - -	5014	Dec. 28	Wash-basins, urinals, sinks, &c.
Browne, A. (<i>Dissés-Leroy</i>) - - -	60	Jan. 6	Preserving and waterproofing leather, canvas, [string, &c.
" A. (<i>Foundries & Forges</i>) -	161	Jan. 14	Making steel.
" A. (<i>Marchand</i>) - - - -	1044	Mar. 10	Valves for engines, &c.
" A. (<i>Pultemans</i>) - - - -	2072	May 16	Ventilating buildings, mines, ships, &c.
" A. (<i>Knight, Farinaus, & Du- [temple.</i>) - - - -	2241	May 27	Stone-breaking machine.
" A. (<i>d'Halluin</i>) - - - -	2575	June 17	Extracting oil and obtaining varnish.
" A. (<i>Lippacher & d'Herville</i>) -	3182	Aug. 11	Bathing apparatus; saving life.
" A. (<i>Cleis & Co.</i>) - - - -	3248	Aug. 18	Producing paintings on fabrics.
" A. (<i>Chaumette, Delpêche, & [Fosty).</i>) - - - -	3301	Aug. 22	Memorandum tablets.
" A. (<i>Brunet</i>) - - - -	3358	Aug. 26	Manufacturing silk.
" A. (<i>Perrier & Boccard</i>) - -	4442	Nov. 16	Motors for sewing-machines, &c.
" A. (<i>Jullien</i>) - - - -	4495	Nov. 21	Metallic alloys of iron, &c.
" B. - - - -	871	Mar. 1	Roller skates.
" E. M., & Burke, J. F. & J. M.	1065	Mar. 11	Railway and tramway switches.
" J. C. - - - -	1002	Mar. 8	Ships' logs.
" S. G., & Prust, W. E. - -	1653	Apr. 20	Making boots and shoes.
" S. G., Boby, W., Lilley, J., & [Adams, E. C.] - - - -	964	Mar. 6	Hydraulic elevator.
Browning, B., & Blinkhorn, T. - -	1902	May 5	Slide-valves.
" J. - - - -	353	Jan. 28	Treadle action of harmoniums, &c.
Bruce, G. B. - - - -	462	Feb. 4	Transferring passengers, &c. over rivers and [valleys.
Brueton, H. - - - -	2337	June 3	Writing-pens.
Brüll, A., & Besson, P. (<i>Imray</i>) - -	5016	Dec. 28	Material of cork and fibrous pulp.
Brumleu, L. (<i>von Nawrocki</i>) - -	4416	Nov. 15	Sulphuric and other mineral acids.
Brundage, E. L. - - - -	3231	Aug. 15	Forging horse-shoe nails.
Brunell, H. - - - -	4850	Dec. 15	Preparing boots and shoes for sewing.
Brunet, J. H. (<i>Browne</i>) - - - -	3358	Aug. 26	Manufacturing silk.
Brunius, F. (<i>Nordenfelt</i>) - - - -	4084	Oct. 23	Electric railway signalling.
Brunon, B. & G. (<i>Clark</i>) - - - -	1181	Mar. 18	Forging, &c. metal articles.
" G. & B. (<i>Clark</i>) - - - -	1181	Mar. 18	Forging, &c. metal articles.
Brunt, J. - - - -	3707	Sep. 21	Driving small machines.
Brunton, G. & J. D. - - - -	1424	Apr. 3	Tunnelling-machinery.
" J. D. - - - -	2544	June 20	Excavating tunnels and sinking shafts.
" J. D. & G. - - - -	1424	Apr. 3	Tunnelling-machinery.
Bryant, C. B., Young, H., & King, T. [Lake]. - - - -	4239	Nov. 2	Smoke-consuming furnaces.
Bryceson, J., & Holmes, N. J. - -	4391	Nov. 13	Audible signals for fog-alarms, &c.
Brydon, W., Wilkinson, J. W., & [Dodgshun, E., A. & I.] - - - -	4419	Nov. 15	Mixing or blending, &c. wools and fibres.
Buchanan, C. - - - -	3054	July 29	Lithographic-presses.
" G. - - - -	3931	Oct. 11	Fibrous material for paper-pulp.
" J. - - - -	327	Jan. 27	Transmitting motion.
Buchholz, J. A. A. - - - -	4119	Oct. 24	Hulling, polishing, &c. grain; driving mill- [stones.
Buck, J. P. & R. R., & Pattinson, F.	2753	July 5	Preparing cotton as an absorbent.
" R. R. & J. P., & Pattinson, F.	2753	July 5	Preparing cotton as an absorbent.
" T. - - - -	366	Jan. 29	Brick and tile machines.
Buckett, J. & W. T. - - - -	4413	Nov. 14	Caloric-engines.
" W. T. & J. - - - -	4413	Nov. 14	Caloric-engines.
Buckingham, J. - - - -	1660	Apr. 20	Ploughs.
Buckland, O. - - - -	2838	July 12	Coal screens and "shutes."
Buckley, C., & Sawyer, L. L. (<i>Hugbes</i>)	2343	June 3	Curtain fixtures.

Name.	Number of Application.	Date of Application.	Subject.
Buckley, J. C., & Hildebrandt, A. -	4064	Oct. 20	Looms and jacquards.
" N., & Hildebrandt, A. -	1668	Apr. 21	Looms.
Bucknill, J. T. - - - - -	4907	Dec. 19	Weighing-machines.
Budd, G. - - - - -	3815	Oct. 2	Umbrellas and parasols.
Budenberg, A. (Bollmann) - - -	219	Jan. 19	Emery wheel grinders.
" A. (Schäffer & Budenberg)	560	Feb. 11	Steam pressure-gauges.
" A. (Schäffer & Budenberg)	3035	July 28	Governors for steam-engines, &c.
Budenberg, C. F., & Schäffer, B. A. -	560	Feb. 11	Steam pressure-gauges.
" [(Budenberg).			
" C. F., & Schäffer, B. A. -	3035	July 28	Governors for steam-engines, &c.
" [(Budenberg).			
" C. F., & Schäffer, B. A. -	3737	Sep. 25	Extinguishing sparks in locomotives, &c.
" [(Wilson).			
Buigne, J. de (Wirth) - - - - -	2979	July 22	Rollers for figured iron, &c.
Buisson, E. - - - - -	4590	Nov. 27	Fire-arms and support for same.
Bull, H. C. (Lake) - - - - -	582	Feb. 12	Loading, &c. ordnance; cartridges.
Bull, W. - - - - -	1751	Apr. 26	Fitting, closing, &c. bottles for aerated liquids.
" W. (Burnell) - - - - -	2239	May 27	Envelopes.
Bullivant, W. M. - - - - -	1636	Apr. 19	Towing and anchoring ships; windlasses, &c.
Bulloch, J. - - - - -	4497	Nov. 21	Shirt-fronts and collars.
Bullock, J. E. (Thompson & Thompson)	4000	Oct. 17	Skimmer attachments to ploughs.
Bullough, J. - - - - -	458	Feb. 4	Looms.
" W. A. - - - - -	1483	Apr. 7	Lifting, &c. liquids; regulating pressure of [fluids.
Bullows, A. - - - - -	1611	Apr. 17	Buckles, rings, &c.
Bunn, P. C. - - - - -	4851	Dec. 15	Pigments.
Burbank, A. (Lake) - - - - -	419	Feb. 2	Lamps.
Burdekin, G. - - - - -	673	Feb. 18	Furnaces.
Burden, G. T., & Nowell, J. - - -	4095	Oct. 23	Liquid-meters.
Burden, J. A. (Wise) - - - - -	1033	Mar. 9	Making horse-shoes, &c.
Burdett, A. & J. - - - - -	453	Feb. 4	Compressing air.
" J. & A. - - - - -	453	Feb. 4	Compressing air.
Barford, J. - - - - -	1629	Apr. 19	Portmanteaux, &c.
" J. - - - - -	1630	Apr. 19	Hot-water dishes.
Burgdorf, E. (Hughes) - - - - -	633	Feb. 16	Raising and lowering weights.
Burgess, C. T. & W. J. - - - - -	2823	July 11	Reaping and mowing machines.
" H. A. - - - - -	602	Feb. 14	Roller skates.
" W. J. & C. T. - - - - -	2823	July 11	Reaping and mowing machines.
Burgh, N. P. - - - - -	1558	Apr. 12	Steam and other engines; valves.
Burke, J. F. & J. M., & Browne, E. M.	1065	Mar. 11	Railway and tramway switches.
" J. M. & J. F., & Browne, E. M.	1065	Mar. 11	Railway and tramway switches.
" M. - - - - -	1252	Mar. 24	Roller skates.
" M. - - - - -	2249	May 29	Roller skates.
Burleigh, W. F. - - - - -	4853	Dec. 15	Velocipedes or bicycles.
Burn, R. - - - - -	4695	Dec. 5	Working railway signals.
Burnell, H. (Ball) - - - - -	2239	May 27	Envelopes.
Burnett, C., & Elliott, A. - - -	847	Feb. 29	Actuating, &c. valves.
" C., & Elliott, A. - - - - -	1582	Apr. 13	Steam and other valves.
" C., & Elliott, A. - - - - -	4465	Nov. 18	Raising water and other liquids.
" J., & McCulloch, D. & T. -	2357	June 6	Steam and other engines.
Burnham Co., Eaton Cole and, & Cle-	1389	Mar. 31	Hose and pipe-nozzles.
" mens, M. (Tongue).			
Burns, W. - - - - -	3262	Aug. 19	Fittings for casks, jars, &c.
Burrell, R. G. - - - - -	4432	Nov. 16	Self-propelling or locomotive-engines.
Burridge, J. - - - - -	4249	Nov. 3	Tiles.
Barrows, F. T., & Colton, J. D. -	2274	May 30	Desks for use in photography.
Burstow, E. - - - - -	1650	Apr. 20	Roller skates.
Burt, E. C. & F. B., & Boydon, O. W.	2290	May 31	Cigar-lighters.
" [(Clark).			
" F. B. & E. C., & Boyden, O. W.	2290	May 31	Cigar-lighters.
" [(Clark).			
Burt, J. G. K. - - - - -	2481	June 15	Utilising fuel for heating.

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Burt, P.	3771	Sep. 28	Dressing stone.
Burtles, R.	1963	May 10	Cutting and polishing glass.
Burton, C.	3052	July 29	Shuttles.
„ E. G.	1107	Mar. 14	Printing-telegraphs.
Bury, D.	3614	Sep. 15	Crank-arms for looms.
„ J.	1280	Mar. 25	Ventilating and chimney cowls.
„ J.	5068	Dec. 30	Self-lubricating steam-packing.
Büsche, A. (<i>Boutherin</i>)	4796	Dec. 11	Winding braid, ribbon lace, &c.
Büsche, E. F. A. (<i>Alexander</i>)	741	Feb. 22	Railway couplings.
Buss, E. (<i>Johnson</i>)	1804	Apr. 15	Governors or speed regulators.
Bussey, G. G.	434	Feb. 3	Roller skates.
„ G. G.	526	Feb. 9	Pneumatic-pistols.
„ G. G.	1360	Mar. 30	Roller skates.
„ G. G.	3523	Sep. 7	Stopping bottles, jars, casks, &c. stoppers and [taps for same]
Butchart, J.	3108	Aug. 4	Manufacture of textile fabrics.
Butcher, J. (<i>Perks</i>)	3511	Sep. 6	Sewing-machine shuttles.
„ J. (<i>Perks</i>)	3512	Sep. 6	Sewing-machines.
Butler, A. E. H. B. & J. O.	3178	Aug. 11	Grinding and polishing bars and tubes.
„ A. E. H. B. & J. O.	4353	Nov. 10	Rolling, grinding, &c. bars and tubes.
„ G.	2090	May 17	Furnaces.
„ G.	2243	May 27	Valves or cocks.
„ G.	3862	Oct. 6	Furnaces.
„ G.	4399	Nov. 13	Furnaces.
„ I., Wright, J. R., & Smith, W.	1635	Apr. 19	Casting steel and iron.
„ J. & J.	1045	Mar. 10	Speed-indicator.
„ J. O. & A. E. H. B.	3178	Aug. 11	Grinding and polishing bars and tubes.
„ J. O. & A. E. H. B.	4353	Nov. 10	Rolling, grinding, &c. bars and tubes.
„ J. H.	4781	Dec. 11	Axle-pulleys for window-sashes.
„ J. S.	4654	Dec. 1	Treating vegetable fibres.
„ J. S.	4655	Dec. 1	Aniline dyes.
„ J. W., & Hodges, J.	4247	Nov. 3	Paving slabs or blocks and making same.
Butterfield, J. C. (<i>Lake</i>)	2382	June 7	Atmospheric hammers.
Butterworth, J., & Wild, A. S.	5030	Dec. 29	Looms.
„ J., Dickinson, W., & [Catlow, C.	2395	June 8	Looms.
„ J., Dickinson, W., & [Catlow, C.	3840	Oct. 4	Looms.
Button, D.	959	Mar. 6	Making bricks and tiles.
Bye, M., & Johnson, I. (<i>Lake</i>)	2257	May 29	Air-pistols and guns.
Byford, A. T.	974	Mar. 6	Copying letters, writings, &c.; ink.
Byrne, F. W.	3163	Aug. 10	Marking out ground.
Byrne, J. (<i>Lake</i>)	2938	July 18	Galvanic-batteries.
Byrom, J.	4894	Dec. 19	Manufacture of hosiery.
Byron, R. G. de L. (<i>Doubler</i>)	995	Mar. 8	Motive-power.
Bywater, W.	3699	Sep. 21	Twisting flax, tow, and other yarns.

C.

Cable Screw Wire Co., American (<i>Lake</i>)	920	Mar. 3	Uniting boot-uppers, hose-tube seams, &c.
Cacheleux, A. F. (<i>Brewer</i>)	775	Feb. 24	Depositing, &c. mail-bags in trains.
Cadman, W., & Huntington, J.	531	Feb. 10	Making marble papers.
Cahen Lambert, L., & Leullier [Thompson].	663	Feb. 17	Indicating, &c. steam-pressure.
Cail, R.	4658	Dec. 1	Building piers, &c. under water.
Caines, C. E., & Mitchell, W.	154	Jan. 14	Braces for trousers, &c.
Calantarients, J. A.	2588	June 23	Substitute for ice for skating, &c.
„ J. A.	4947	Dec. 22	Surfaces for skating and sliding upon.

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Calderwood, J. - - - - -	2737	July 4	Utilizing sulphuric acid tar.
Caldwell, A. - - - - -	1013	Mar. 9	Regulating flow of water, &c.; liquid-meters.
" G. G. - - - - -	3143	Aug. 9	Hydraulic propellers for vessels.
" J. - - - - -	3287	Aug. 22	Medical unguent.
Callas, H. - - - - -	2846	July 12	Blind-rollers and fittings.
" H. - - - - -	2851	July 13	Constructing flues.
Calvert, A., & Hird, R. - - - -	3695	Sep. 21	Securing glass in window frames.
" G. A. - - - - -	2096	May 18	Slide-valves of prime-movers.
Calvo, N. A., & Bejar y O'Lawlor [L. de,	1303	Mar. 27	Electric-telegraphy.
Camacho, J. S. (Darkin) - - - -	52	Jan. 5	Electric-battery.
Cambridge, E. - - - - -	1017	Mar. 9	Roller skates.
Cameron, J. - - - - -	4784	Dec. 11	Steam-pumps.
" Margaret M. C. - - - - -	677	Feb. 18	Basket for flowers.
" R. M. - - - - -	4172	Oct. 27	Convertible school desks.
Cammack, J., & Walker, A. - - -	903	Mar. 3	Sulphates of soda and potash.
" J., & Walker, A. - - - -	1513	Apr. 10	Heating, evaporating, &c. liquors and salts, [and oxidising, drying, &c. refuse of same.
" R. & W. - - - - -	2458	June 14	Dress fastenings.
" W. & R. - - - - -	2458	June 14	Dress fastenings.
Camroux, M. O., & Quick, J. - - -	3886	Oct. 7	Smoking-pipes.
Campbell, A. (Newton) - - - - -	4644	Nov. 30	Delivery apparatus for printing-presses.
Campbell, G. L., & Clare, J. F. L. -	1155	Mar. 17	Game of skill.
" J., & Bradley, C. - - - -	4252	Nov. 3	Combing fibres.
Campion, W. - - - - -	5027	Dec. 29	Seaming or joining looped or other fabrics.
Canard, F. - - - - -	2114	May 19	Tinting furs and skins.
Cane, R. - - - - -	3237	Aug. 17	Bedsteads, cots, or hammocks.
Cant, H., & Wilson, W. V. - - -	4912	Dec. 20	Aniline dyes.
Capon, G. G., & Boughtwood, T. O. -	51	Jan. 5	Securing wine and other cases.
Cardozo, H. G. - - - - -	3222	Aug. 16	Stoppering and wiring bottles, &c.
Carey, A. C. (Pope) - - - - -	1381	Mar. 30	Air-pistols.
Carey, E. - - - - -	3950	Oct. 12	Furnaces.
Cario, C. J. (Pieper) - - - - -	780	Feb. 24	Steam-engine expansion gear.
Cariss, J. - - - - -	413	Feb. 2	Railway signalling.
Carmein, P. J. - - - - -	3930	Oct. 11	Casters for furniture, skates, &c.
Carmont, W. H. - - - - -	1500	Apr. 8	Angle and other iron bars.
Caro, H. (Johnson) - - - - -	1229	Mar. 22	Obtaining colouring matters.
Carpenter, F. W. (Haddan) - - -	4281	Nov. 6	Lubricators for wheels of vehicles.
Carpenter, James - - - - -	1325	Mar. 28	Ice and roller skates.
" James, & Martin, G. - - -	2119	May 19	Clocks, &c.
" Joseph, & Sabell, J. - - -	2781	July 8	Tandem dog-cart.
Carpenter, Mary P. (Lake) - - -	1226	Mar. 22	Sewing-machines.
Carpenter, W. T. - - - - -	1302	Mar. 27	Gas-making.
Carr, C. (Johnson) - - - - -	1656	Apr. 20	Wheel or roller skates.
Carr, J. O., & Chapman, G. E. - -	4224	Nov. 1	Railway waggons, pit-corves, &c.
" W. R., & Urwin, J. - - -	1288	Mar. 25	Brick-making.
Carré, Heurtier (J. J.), & Co. (Clark)	4358	Nov. 10	Cupola furnaces.
" E. (Clark) - - - - -	4164	Oct. 26	Freezing and refrigerating apparatus.
Carré, F. P. E., & Jullien, E. - -	3594	Sep. 13	Refrigerating apparatus.
Carrey, J. (Wirth) - - - - -	454	Feb. 4	Woven fabrics.
Carrière, P. - - - - -	4407	Nov. 14	Regulator for steam-engines.
Carroll, F. (Beck) - - - - -	2539	June 19	Furnaces for gas-making, &c.
Carrozzi, G. N. (Lake) - - - -	3739	Sep. 25	Apparatus to assist in learning singing.
Carruthers, J. H., Handyside, J. B., [& Alley, S.	3155	Aug. 9	Wheels.
Carter, H., & Warren, C. - - -	3858	Oct. 6	Roller skate.
" J. - - - - -	1990	May 11	Reading-casels and tables.
" W. A. - - - - -	4052	Oct. 20	Incinerating furnaces.
" W. H. - - - - -	1322	Mar. 28	Preserving animal substances.
" W. O. - - - - -	1173	Mar. 18	Cutting or quarrying slate, &c.
" W. T., & Tompkins, R. - - -	1046	Mar. 10	Wheel or roller skates.
Cartland, J., & Underhill, J. - -	3989	Oct. 16	Cast metallic butt-hinges.
" J., & Underhill, J. - - -	4230	Nov. 1	Metallic butt-hinges.

Name.	Number of Applica- tion.	Date of Applica- tion.	Subject.
<i>Cornwall, M. de Pennersville</i> . . .	653	Feb. 17	Electro-dynamic apparatus.
<i>Cookin, P. E., & Cole, T. W.</i> . . .	2624	Mar. 13	Electro-magnetic engine.
<i>Cropper, E.</i>	2445	June 12	Holding and binding letters, &c.
<i>Crombagne, G. A. (Johnson)</i> . . .	1222	Mar. 25	Treating vibrating parts of mechanical instru- ments, &c.
<i>Crown, B. H.</i>	243	Jan. 21	Furnaces.
<i>Cusack, J.</i>	3623	July 27	Moulding machinery.
<i>Cuthbert, A. (Vaughan)</i>	1037	Mar. 19	Trowsers suspender.
<i>Cuthbert, J. A. B. von (Petitpierre)</i> .	763	Feb. 23	Imitation marbles, &c.
<i>Cuadro, J. B. V. de (Dufréne)</i> . . .	1821	May 1	Sewing-machine.
<i>Cuswell, J. G. (Chormeris)</i>	4584	Nov. 27	Roller skates.
<i>Cuthbertson, H., & Galt, E. (Alex- sander)</i>	2640	June 27	Leasting boots; stretching leather and skins.
<i>Cuthels, E. H.</i>	3145	Aug. 9	Purifying gas.
<i>Cutler, C., Butterworth, J., & Dickin- son, W.</i>	2395	June 8	Looms.
„ <i>C., Butterworth, J., & Dickin- son, W.</i>	3840	Oct. 4	Looms.
<i>Cutlin, A.</i>	3445	Sep. 1	Roller skates.
<i>Cusner, W. G., & Hammond, J.</i> . . .	4529	Nov. 22	Screwing-tackle.
<i>Cauty, H. E.</i>	56	Jan. 6	Preventing draughts in houses.
„ <i>H. E.</i>	980	Mar. 7	Postice.
<i>Cuvell, L. (Thomas)</i>	852	Feb. 29	Desulphurising, roasting, &c. ores.
„ <i>L. (Thomas)</i>	854	Feb. 29	Roasting and amalgamating ores.
<i>Chadburn, W.</i>	280	Jan. 24	Skates.
<i>Chadderton, J., Allmark, J., & Haigh, B.</i>	169	Jan. 15	Steam-engine valves.
<i>Chadwick, G., & Wild, A. H.</i>	4039	Oct. 19	Loom pickers and forming same.
„ <i>H. J., & Giggie, J.</i>	1860	May 3	Lubricating engine cylinders.
„ <i>J. (Harley)</i>	717	Feb. 21	Dyeing and printing fabrics.
„ <i>T., & Hadden, T.</i>	674	Feb. 18	Sewing-machines.
<i>Chaffer, J., & Scholes, J. H.</i>	1024	Mar. 9	Loom pickers.
<i>Challin, A. B.</i>	3475	Sep. 2	Railway signals.
<i>Chalmers, W.</i>	3063	July 31	Constructing windows.
<i>Chaloner, J., T. & W.</i>	1093	Mar. 13	Steam-traps.
„ <i>T., W. & J.</i>	1093	Mar. 13	Steam-traps.
„ <i>W., J. & T.</i>	1093	Mar. 13	Steam-traps.
<i>Chamberlain, F.</i>	915	Mar. 3	Making bricks, tiles, &c.
„ <i>F.</i>	3507	Sep. 6	Moulding and pressing bricks, &c.
„ <i>H., & Jones, A. W.</i>	2865	July 13	Solitaires and studs.
<i>Chamberlain, O. McC. (Tucker)</i> . .	819	Feb. 28	Plaiting textile fabrics, paper, &c.
<i>Chambers, J. E.</i>	832	Mar. 4	Cleaning knives.
„ <i>J. E., & Davison, W. B.</i>	691	Feb. 18	Roller skates.
<i>Chamolle, E. (Gedgo)</i>	1711	Apr. 22	Hydraulic generator or spiral pump.
<i>Chandler, J. & S.</i>	1395	Mar. 31	Railway appliances.
„ <i>N.</i>	4286	Nov. 6	Tea-kettles, &c.
„ <i>S. & J.</i>	1395	Mar. 31	Railway appliances.
<i>Chanel, J. C. A. (Brower)</i>	160	Jan. 14	Preserving food, &c.
<i>Channin, E. C. (Bourgeois)</i>	3832	Oct. 3	Ladies' bow or cravat fasteners.
<i>Chanot, P. (Morgan-Brown)</i>	2000	May 12	Filtering reservoir.
<i>Chapin, H. A., & Gilbert, S. P. (Lake)</i>	2672	June 28	Lamps and lamp-burners.
<i>Chapitel, C.</i>	2954	July 20	Breaking stones, ores, &c.
<i>Chapman, A., & Watson, J.</i>	2729	July 3	Pressing cotton, &c.
„ <i>C., & de Russett, E. W.</i>	118	Jan. 11	Constructing ships.
„ <i>C. (Green)</i>	850	Feb. 29	Roller skates.
„ <i>C. E., & Carr, J. O.</i>	4224	Nov. 1	Railway waggons, pit-corves, &c.
„ <i>L.</i>	3071	July 31	Planing boards and sharpening cutters.
<i>Chapman, M. S. (Morgan-Brown)</i> . .	2883	July 14	Making envelopes.
<i>Charagant, E.</i>	1021	Mar. 9	Umbrellas, parasols, &c.
<i>Charbonnier, M. & R. (Johnson)</i> . .	3298	Aug. 22	Photographing upon or ornamenting glass, &c.
„ <i>R. & M. (Johnson)</i>	3298	Aug. 22	Photographing upon or ornamenting glass, &c.
<i>Chart, J. Magaud.</i>	1314	Mar. 27	Making corks.
<i>Charon & Boulieu Bros. (Brower)</i> . .	4552	Nov. 23	Centrifugal drying machines.

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Charlton, T., & Duddell, G. - - -	3543	Sep. 8	Drawing and forcing water, &c.; propelling [vessels.
„ T. Mearns, J., & Wandless, W.	3990	Oct. 16	Making horse-shoes.
Charpentier, T. - - - - -	3289	Aug. 22	Furnaces.
Chatwin, J. - - - - -	3410	Aug. 30	Gas-burners; and sustaining shades for same.
Chaumette, A., Delpêche, J., & Fosty, J. B. [Browne]	3301	Aug. 22	Memorandum tablets.
Chebischef, P. (Wise) - - - - -	3799	Sep. 29	Motive-power engine governors.
Cheeswright, F. - - - - -	4841	Dec. 14	Working railway signals.
Chell, P., & Musgrave, J. - - - - -	2085	May 17	Steam-engines.
Chernoff, D. (Anderson) - - - - -	2506	June 16	Gas furnaces.
Cherry, C. E. & W. P. - - - - -	125	Jan. 11	Bottle-stoppers.
„ C. E. & W. P. - - - - -	558	Feb. 11	Railway alarm signals.
„ C. E. & W. P. - - - - -	4779	Dec. 11	Gas-making.
„ C. E. & W. P. - - - - -	2140	May 20	Making steel.
„ H. - - - - -	4023	Oct. 18	Making welded iron and steel chain.
„ W. P. & C. E. - - - - -	125	Jan. 11	Bottle-stoppers.
„ W. P. & C. E. - - - - -	558	Feb. 11	Railway alarm signals.
„ W. P. & C. E. - - - - -	2140	May 20	Making steel.
„ W. P. & C. E. - - - - -	4779	Dec. 11	Gas-making.
Cheshire, J. - - - - -	197	Jan. 18	Rink or roller skates.
„ J. - - - - -	2209	May 25	Road or rink skates.
Chesterman, W. - - - - -	665	Feb. 17	Measuring bands or chains.
Child, S. - - - - -	2076	May 17	Roller skates.
Childs, A. B. - - - - -	1906	May 6	Cleaning grain; bolting flour; separating, &c. [middlings.
Chisholm, J., & Clegg, J. - - - - -	1844	May 2	Mules.
Choch, Count G. de, & Bellotte, S. - - - - -	821	Feb. 28	Mending or fishing axles, shafts, &c.
Choomsai, P. (Caswell) - - - - -	4854	Nov. 27	Roller skates.
Choules, T. - - - - -	36	Jan. 4	Cleaning and polishing boots, shoes, and other [articles.
Christian-Duclos, P. - - - - -	4398	Nov. 13	Stoppers for bottles, jars, &c.
Christie, D. A. T. (Anderson) - - - - -	4184	Oct. 28	Cutting hay, chaff, &c.
„ J. J. - - - - -	2698	June 30	Rolling iron, steel, &c.
Christofle, H. A. P., & Bouilhet, H. C. [Johnson]	2519	June 17	Treating ores containing nickel.
Christophe, A. - - - - -	3195	Aug. 12	Fire-escape.
Christy, T. (Goodwin) - - - - -	527	Feb. 9	Roller skates.
Chubb, G. H. - - - - -	436	Feb. 3	Safes and strong rooms.
„ G. H., & Shore, G. N. - - - - -	900	Mar. 2	Furnaces for steam-boilers, &c.
Churchill, C. (Gee) - - - - -	218	Jan. 19	Washer for bolts and nuts.
„ F. - - - - -	3954	Oct. 12	Water-closets, sinks, and bath drains.
Churchward, G. D., & Messenger, T. - - - - -	211	Jan. 19	Steam and other engines.
Chutter, G. F. & T. - - - - -	3849	Oct. 5	Signalling apparatus.
„ T. & G. F. - - - - -	3849	Oct. 5	Signalling apparatus.
Clabrough, J. P. - - - - -	1241	Mar. 23	Fire-arm barrels.
Clamond, C. - - - - -	937	Mar. 4	Skating rinks.
Clapham, T. & W. - - - - -	2585	June 23	Constructing tunnels.
„ W. & T. - - - - -	2585	June 23	Constructing tunnels.
Clare, J. F. L., & Campbell, G. L. - - - - -	1155	Mar. 17	Game of skill.
„ T. D. - - - - -	3332	Aug. 24	Autographic printing.
Clark, A. - - - - -	4327	Nov. 8	Raising and lowering apparatus.
„ A. M. (Rose) - - - - -	26	Jan. 3	Scouring, &c. hides and skins.
„ A. M. (Morton) - - - - -	55	Jan. 5	Chains for hanging sashes, doors, &c.
„ A. M. (Holske & Babbitt) - - - - -	90	Jan. 7	Friction-clutches.
„ A. M. (Ellis) - - - - -	136	Jan. 12	Screw-propellers.
„ A. M. (Macqué) - - - - -	237	Jan. 20	Grain-mills.
„ A. M. (Fisher) - - - - -	295	Jan. 25	Shearing, &c. boiler plates.
„ A. M. (Farnham) - - - - -	296	Jan. 25	Glove fastenings.
„ A. M. (Jenks) - - - - -	305	Jan. 26	Gates for railway crossings.
„ A. M. (Heyler) - - - - -	336	Jan. 27	Compressing air; motive-power.
„ A. M. (Bertin, alias Bertin-Badouveau) - - - - -	355	Jan. 28	Hardening wood.

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Clark, A. M. (Folacci) - - - -	357	Jan. 28	Rendering wood, water and fire-proof.
" A. M. (Lontin) - - - -	388	Jan. 31	Dynamo-electric machines.
" A. M. (Paquelin) - - - -	387	Jan. 31	Producing heat and light.
" A. M. (Gower) - - - -	407	Feb. 1	Row-lock.
" A. M. (François J., La Société des Mines et Fonderies de Zinc).	444	Feb. 3	Pulverising ores, &c.
" A. M. (Fargue) - - - -	477	Feb. 5	Fountain pens.
" A. M. (Brandtner) - - - -	536	Feb. 10	Treadle-mechanism.
" A. M. (Thayer) - - - -	669	Feb. 17	Motors for tram-cars, &c.
" A. M. (Marinoni) - - - -	681	Feb. 18	Printing-machines.
" A. M. (Kirtland) - - - -	752	Feb. 23	Casting the lead on board ship.
" A. M. (Angell) - - - -	864	Mar. 1	Heat radiators.
" A. M. (Boragfeldt) - - - -	879	Mar. 1	Life-rafts.
" A. M. (Himrod) - - - -	953	Mar. 6	Pig-iron; furnaces for making same.
" A. M. (Hahn) - - - -	1031	Mar. 9	Hydraulic elevators.
" A. M. (Fields) - - - -	1032	Mar. 9	Making steel.
" A. M. (Brice) - - - -	1050	Mar. 10	Photographic apparatus.
" A. M. (Winnerl) - - - -	1051	Mar. 10	Chronometer balances.
" A. M. (Bedell) - - - -	1123	Mar. 15	Screw-wrenches.
" A. M. (Hélowis) - - - -	1143	Mar. 16	Metallic laces or trimmings.
" A. M. (Bramwell) - - - -	1144	Mar. 16	Carding-machines.
" A. M. (Bradley) - - - -	1145	Mar. 16	Ocean station for telegraphs.
" A. M. (Holt) - - - -	1146	Mar. 16	Hay, straw, &c. and ditching knife.
" A. M. (Brunon & Brunon) - -	1181	Mar. 18	Forging, &c. metal articles.
" A. M. (Treyvoux & Neyret) -	1196	Mar. 20	Air and water-proof fabrics.
" A. M. (Hunter & Hunter) - -	1237	Mar. 23	Spinning fibres.
" A. M. (Joannard) - - - -	1315	Mar. 27	Feeding-bottles.
" A. M. (Gégnon) - - - -	1354	Mar. 29	Machine-bands, cables, &c.
" A. M. (Shepard) - - - -	1361	Mar. 30	Device for expanding hoofs.
" A. M. (Howells) - - - -	1362	Mar. 30	Dental apparatus.
" A. M. (Audouin) - - - -	1398	Mar. 31	Lining for furnaces.
" A. M. (Bartlett & Read) - -	1407	Apr. 1	Cutting veneers.
" A. M. (Nelson) - - - -	1425	Apr. 3	Making cakes.
" A. M. (Waters & Wilcox) - -	1464	Apr. 5	Feed-water heaters.
" A. M. (Doremus) - - - -	1485	Apr. 7	Chairs.
" A. M. (Wagner & Schoenberg)	1548	Apr. 11	Sea-sounding and alarm apparatus.
" A. M. (Atwood & Shepard) -	1641	Apr. 19	Railway wheels.
" A. M. (Servier) - - - -	1649	Apr. 20	Gas-retorts.
" A. M. (Jenkins & Baylis) - -	1748	Apr. 25	Pins.
" A. M. (Hill) - - - -	1763	Apr. 26	Solving navigation problems.
" A. M. (Courtenay) - - - -	1764	Apr. 26	Automatic signal buoy.
" A. M. (Paddock) - - - -	1830	May 1	Combined calendar and time-piece.
" A. M. (Rice) - - - -	1831	May 1	Charging gas-retorts.
" A. M. (Jackson) - - - -	2197	May 24	Harvesters.
" A. M. (Gadot) - - - -	2212	May 25	Rifling fire-arms and ordnance.
" A. M. (Holthausen & Kintzinger)	2213	May 25	Castors, roller-skates, &c.
" A. M. (Drinen, Kehoe, & Shanley)	2260	May 29	Beer taps.
" A. M. (Warner) - - - -	2261	May 29	Polishing buttons.
" A. M. (Boyden, Burt & Burt) -	2290	May 31	Cigar-lighters.
" A. M. (Graf) - - - -	2318	June 1	Trimming, &c. boot heels and soles.
" A. M. (Dufort) - - - -	2368	June 6	Steam and other turbines.
" A. M. (Walsh, Redden, & Walsh)	2437	June 13	Securing mouths of grain bags, &c.
" A. M. (Grocock) - - - -	2473	June 14	Parquet-flooring.
" A. M. (Marinoni) - - - -	2511	June 16	Printing from blocks and electrotypes.
" A. M. (Lespermont) - - - -	2524	June 17	Evaporating and incinerating.
" A. M. (Freshfield) - - - -	2533	June 19	Hat-bodies.
" A. M. (Rave) - - - -	2534	June 19	Black dye.
" A. M. (Lugo & Gandolfo) - -	2535	June 19	Preparing bone-black; making, &c. sugars.
" A. M. (Miles) - - - -	2654	June 27	Railway wheels.
" A. M. (Pansard) - - - -	2680	June 29	Waterproofing compound for skins, &c.
" A. M. (Bouchacourt et Cie, & Delille, A.) - - - -	2702	June 30	Screw-threading rods, bolts, &c.
" A. M. (Mosquera) - - - -	2739	July 4	Coffee-pulping machine.

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Clark, A. M. (<i>Toselli</i>) - - - - -	2757	July 5	Making tea, coffee, and other extracts.
" A. M. (<i>Junod-Pattus</i>) - - - - -	2797	July 8	Keyless repeating watches.
" A. M. (<i>Bandier</i>) - - - - -	2829	July 11	Ornamenting match-boxes.
" A. M. (<i>Larmaraud</i>) - - - - -	2831	July 11	Water-meters.
" A. M. (<i>Robinson</i>) - - - - -	2847	July 12	Combined hames and horse-collar.
" A. M. (<i>Eliaers</i>) - - - - -	2900	July 14	Folding-chairs, &c.
" A. M. (<i>Vogel & Bowron</i>) - - - - -	2937	July 18	Decorticating china-grass, &c.
" A. M. (<i>Schock</i>) - - - - -	3021	July 26	Washing barrels, bottles, &c.
" A. M. (<i>Paquelin</i>) - - - - -	3055	July 29	Producing heat for surgical purposes, &c.
" A. M. (<i>Long</i>) - - - - -	3093	Aug. 2	Fish-joints, bolts, and nut-locks.
" A. M. (<i>Maynard</i>) - - - - -	3094	Aug. 2	Generating, &c. sulphurous & other acid gases.
" A. M. (<i>Stierlin</i>) - - - - -	3194	Aug. 12	Railways.
" A. M. (<i>Lontin</i>) - - - - -	3264	Aug. 19	Dynamo-electric & magneto-electric machines.
" A. M. (<i>Smith</i>) - - - - -	3274	Aug. 21	Smoothing-planes.
" A. M. (<i>Moschcowitz</i>) - - - - -	3328	Aug. 24	Starting gear for tram-cars, &c.
" A. M. (<i>Lewine</i>) - - - - -	3398	Aug. 28	Glove-fastener.
" A. M. (<i>Boeringer</i>) - - - - -	3473	Sep. 2	Printing woven and other fabrics.
" A. M. (<i>Mallet</i>) - - - - -	3485	Sep. 4	Purifying gas.
" A. M. (<i>Foster</i>) - - - - -	3497	Sep. 5	Glove-fastenings.
" A. M. (<i>Roussel & Peltier</i>) - - - - -	3498	Sep. 5	Motive-power.
" A. M. (<i>Bourquin & Van-Heers</i>) - - - - -	3607	Sep. 14	Producing illuminated advertisements.
" A. M. (<i>Treyvoux</i>) - - - - -	3680	Sep. 20	Air and waterproof fabrics.
" A. M. (<i>Smith & Foster</i>) - - - - -	3735	Sep. 25	Tools for shaving, &c. leather edges.
" A. M. (<i>Follot</i>) - - - - -	3764	Sep. 27	Flock-paper for paper-hangings, &c.
" A. M. (<i>Krebs</i>) - - - - -	3801	Sep. 29	Screw-threading bottles, &c., caps for same.
" A. M. (<i>Rogé, Poret, Baffoy, & Dupré</i>) - - - - -	3823	Oct. 3	Treating grain, plants, &c. for preserving same.
" A. M. (<i>Lozier</i>) - - - - -	3948	Oct. 12	Exercising apparatus; testing chains, &c.
" A. M. (<i>Howe</i>) - - - - -	3980	Oct. 14	Soldering ends of provision tins.
" A. M. (<i>Derriey</i>) - - - - -	4080	Oct. 21	Newspaper printing and folding machines.
" A. M. (<i>Ballin</i>) - - - - -	4103	Oct. 23	Artificial flowers, fruit, grasses, &c.
" A. M. (<i>Lake & Hazelton</i>) - - - - -	4126	Oct. 24	Spray producers for decomposing water.
" A. M. (<i>Carré</i>) - - - - -	4164	Oct. 26	Freezing and refrigerating apparatus.
" A. M. (<i>Dathis</i>) - - - - -	4202	Oct. 30	Rail and tramway locomotives, carriages, &c.
" A. M. (<i>Jeanvoine</i>) - - - - -	4212	Oct. 31	Composition for extinguishing fire.
" A. M. (<i>Barbary</i>) - - - - -	4245	Nov. 2	Washing small coal, &c.
" A. M. (<i>Fargue</i>) - - - - -	4260	Nov. 3	Writing pen.
" A. M. (<i>Mayer</i>) - - - - -	4291	Nov. 6	Shafts and poles for vehicles.
" A. M. (<i>Smith, Spruill, & Wood</i>) - - - - -	4312	Nov. 7	Electric-light baoy.
" A. M. (<i>Mills</i>) - - - - -	4313	Nov. 7	Gear wheels for shafts.
" A. M. (<i>Heurtier, Carré, & Co.</i>) - - - - -	4358	Nov. 10	Cupola furnaces.
" A. M. (<i>Bradley</i>) - - - - -	4386	Nov. 11	Generating, &c. gas for motive-power.
" A. M. (<i>Geistodt & Plicque</i>) - - - - -	4433	Nov. 16	Decolorising, &c. saccharine juices.
" A. M. (<i>Clifford</i>) - - - - -	4521	Nov. 21	Separating and scouring grain.
" A. M. (<i>Field</i>) - - - - -	4522	Nov. 21	Feed-apparatus for nail machines.
" A. M. (<i>Maynard</i>) - - - - -	4601	Nov. 28	Softening, cleansing, &c. fibres and fabrics.
" A. M. (<i>Russell & Roberts</i>) - - - - -	4602	Nov. 28	Railway couplings.
" A. M. (<i>Jacobi</i>) - - - - -	4609	Nov. 28	Brakes and brake-wheels for carriages.
" A. M. (<i>Schaefer et fils</i>) - - - - -	4808	Dec. 13	Ornamenting furs and feathers.
" A. M. (<i>Dumonthier</i>) - - - - -	4825	Dec. 13	Walking-stick guns.
" A. M. (<i>Plichon & Thuau</i>) - - - - -	4847	Dec. 14	Crucibles and portable furnaces.
" A. M. (<i>Raulin</i>) - - - - -	4923	Dec. 20	Treating wool.
" A. M. (<i>Colwell</i>) - - - - -	4945	Dec. 22	Drying bone-black.
" A. M. (<i>Nolf</i>) - - - - -	4963	Dec. 22	Dressing and moulding stone.
" A. M. (<i>Kurtz</i>) - - - - -	4990	Dec. 23	Operating railway brakes, &c.
" A. M. (<i>Strong</i>) - - - - -	5005	Dec. 27	Collecting, &c. sediment in steam-boilers.
" A. M. (<i>Larmanjat</i>) - - - - -	5021	Dec. 28	Moulding inlaid designs in making tiles.
" A. M. (<i>Maurel</i>) - - - - -	5022	Dec. 28	Sifting and purifying semolina and groats.
" A. M. (<i>Thaulow</i>) - - - - -	5048	Dec. 29	Manufacture of size.
" A. M. (<i>Messrs. Teste, père et fils, & Pichat</i>) - - - - -	5049	Dec. 29	Umbrella and sunshade fastenings.
" C. F., & Purslow, J. - - - - -	2153	May 20.	Lids for sauce-pans, &c.
" C. H. - - - - -	740	Feb. 22	Preventing injury in falling.

Name.	Number of Application.	Date of Application.	Subject.
Clark, Elizabeth - - - - -	1727	Apr. 24	Abdominal belts and trunks.
" Elizabeth - - - - -	3027	July 27	Under-dress for ladies.
" G. - - - - -	165	Jan. 15	Skating rinks.
" G. - - - - -	929	Mar. 4	Roller skates.
" G. - - - - -	1180	Mar. 18	Roller skates.
" G. - - - - -	2097	May 18	Roller skates.
" G. - - - - -	3419	Aug. 30	Axles of wheels for carriages and roller skates.
Clark, G. P. (Lake) - - - - -	2978	July 22	Rollers for wringing-machines, &c.
Clark, G. W. - - - - -	2173	May 23	Water-wheels.
" H. F., & Palmer, T. G. - - - - -	3755	Sep. 26	Cancelling stamps; post-marking letters, &c.
Clark, Jacob (Gardner) - - - - -	3259	Aug. 19	Lamps for railway carriages, ships, &c.
" Jacob (Gardner) - - - - -	4439	Nov. 16	Railway and tramway carriage couplings.
Clark, James & W. - - - - -	351	Jan. 28	Drilling holes in boiler shells.
" James & W. - - - - -	2191	May 24	Constructing pistons.
" James & W., & Temple, T. - - - - -	1864	May 3	Hydraulic governor.
" John - - - - -	3465	Sep. 2	Coating metals used for preserving substances.
" John - - - - -	4226	Nov. 1	Winding and making up sewing thread.
Clark, John T. (Mills) - - - - -	4244	Nov. 2	Railway rails and producing same.
Clark, R. McA. - - - - -	2754	July 5	Advertising.
" S. W. - - - - -	2862	July 13	Hand signal lamps.
" W. - - - - -	3592	Sep. 13	Shearing sheep or other animals.
" W. - - - - -	3708	Sep. 21	Roller skate.
" W. (Wallace) - - - - -	601	Feb. 14	Slide-valves.
" W. (Rousseau & Smith) - - - - -	1866	May 3	Railway switches and signals.
" W. (Duchemin) - - - - -	1903	May 5	Ship and other compasses.
" W. (Knab) - - - - -	1930	May 8	Treating sewage water.
" W. (Bastel) - - - - -	1931	May 8	Electro-magnetic engines.
" W. (Miltimore) - - - - -	1953	May 9	Railway carriage axles.
" W. (Weston) - - - - -	1954	May 10	Wheel-harrows and seed-sowers.
" W. (Mauger) - - - - -	1955	May 10	Trimming playing-cards.
" W. (Mazza) - - - - -	1965	May 10	Boiler feed-water apparatus.
" W. (Fowler) - - - - -	1989	May 11	Steering-propellers.
" W. (Collin) - - - - -	2049	May 15	Sharpening razors, &c.
" W. (Hubbard) - - - - -	2056	May 16	Coffee-pots.
" W. (Miller) - - - - -	2057	May 16	Making tea, coffee, &c.
" W. (Gervais, Murisier, & Perret) - - - - -	2058	May 16	Camp-kettles.
" W. (Williams & Hill) - - - - -	2059	May 16	Steam-hammers.
" W. (Doremus) - - - - -	3081	Aug. 1	Cases for sash-pulleys, door rollers, &c.
" W. (Thompson) - - - - -	3082	Aug. 1	Steam-engine indicators.
" W. (Potel) - - - - -	3418	Aug. 30	Woven fabric.
" W. & J. - - - - -	351	Jan. 28	Drilling holes in boiler shells.
" W. & J. - - - - -	2191	May 24	Constructing pistons.
" W., & Gammon, J. - - - - -	2715	July 1	Roller skates.
" W. & J., & Temple T. - - - - -	1864	May 3	Hydraulic governor.
" W. C. S. - - - - -	2728	July 3	Tell-tale clocks.
" W. T., & Shaw, J. - - - - -	4887	Dec. 18	Operating valves of air-compressors.
Clarke, F. - - - - -	1235	Mar. 23	Waggonettes.
" F. R. - - - - -	3556	Sep. 11	Cutter blocks for moulding machines.
" G. S., & McLeod, H. - - - - -	4501	Nov. 21	Determining velocity of rotating bodies.
" J. A. - - - - -	3524	Sep. 7	Tilling land.
" J. A. - - - - -	3768	Sep. 27	Tilling land.
Clarke, J. N., & Greenwood, W. M. - - - - -	667	Feb. 17	Making horse-shoes.
[(Lake).			
Clarke, P. (Proctor) - - - - -	1539	Apr. 11	Spark-arresters.
" S., & Grayson, J. - - - - -	1765	Apr. 26	Gas-making.
" T. - - - - -	1268	Mar. 24	Tramway rails and chairs.
Clarkson, T. C. - - - - -	4027	Oct. 18	Pontoons, boats, barrels, cartridge cases, &c.
" T. C. - - - - -	4370	Nov. 11	Ordnance, and working same; small arms.
Claus, C. F., & Wallace, R. W. - - - - -	2950	July 19	Salts of barium, &c.; extracting silver.
" C. F., & Wallace, R. W. - - - - -	2951	July 19	Salts of zinc and applying same.
" C. F., & Lowndes, A. E. G. - - - - -	3992	Oct. 16	Detergents and applying same.
Clavier, A. - - - - -	228	Jan. 20	Tanning.
Claxton, C. & C. - - - - -	734	Feb. 22	Bottle-stoppers.

Name.	Number of Application.	Date of Application.	Subject.
Claxton, W. B., & Broad, J.	1436	Apr. 4	Envelopes and wrappers.
Clay, T.	5069	Dec. 30	Looms.
Clay, H. M., Van Vleck, G. H., Jawley, [J. S., & Sangster, J. (Lake).	857	Feb. 29	Fare-registers for tram-cars, &c.
Clayton, J.	383	Jan. 31	Making bricks, tiles, &c.
" J.	594	Feb. 14	Apparatus for athletic sports.
" J. W.	4932	Dec. 21	Waterproof-paper.
" N., & Shuttleworth, J.	2962	July 21	Adjusting portable machinery; chocking wheels.
" N., & Shuttleworth, J.	3687	Sep. 20	Road-locomotives or traction-engines.
Clegg, J., & Chisholm, J.	1844	May 2	Mules.
Cleis, G. & Co. (Browne)	3248	Aug. 18	Producing paintings on fabrics.
Clemens, M., & Eaton, Cole, & Burnham Co. (Tongue).	1389	Mar. 31	Hose and pipe nozzles.
Cleminson, J.	3029	July 27	Railway and tramway axles and breaks.
Clerc, F. L. (Johnson)	2815	July 11	Extracting zinc from its ores, &c.
Cleuet, A. (Ball)	3568	Sep. 12	Carriage shafts.
Cliff, W. & W. D.	416	Feb. 2	Ornamental bricks.
" W. D. & W.	416	Feb. 2	Ornamental bricks.
Clifford, W. P. (Clark)	4521	Nov. 21	Separating and scouring grain.
Clifton, H. T. F.	4531	Nov. 22	Barrows, trucks, carts, and other vehicles.
Clough, J.	1388	Mar. 31	Combing fibres.
" J. W.	1456	Apr. 5	Combing fibres.
" S.	2460	June 14	Shuttles.
Clubb, J.	1078	Mar. 11	Examining into casks and other vessels to ascertain condition.
Coats, J.	566	Feb. 11	Doubling, &c. yarn and thread.
" T. (Conant)	4448	Nov. 17	Automatic fire-extinguisher.
Coble, T. H.	4952	Dec. 22	Potash alum.
" T. H., & Dixon, J. A.	1321	Mar. 28	Treating copper ores.
Coccapieller de Guggenbühler, G. F.	787	Feb. 24	Brakes for trams or vehicles.
" " " G. F.	788	Feb. 24	Stopping vehicles and detaching horses therefrom.
Cochrane, W.	2192	May 24	Surveying instruments.
Cocker, B. F. & T. F.	3643	Sep. 18	Hardening, &c. steel wire and strips.
" J.	2158	May 22	Washing-machines.
" S.	1616	Apr. 18	Rail fastenings for tramways, &c.
" S. (Paine)	4764	Dec. 9	Straightening and coating wire.
" S., & Langley, J.	692	Feb. 18	Tramway chairs and rails.
" T. F. & B. F.	3643	Sep. 18	Hardening, &c. steel wire and strips.
Cocking, T. S.	909	Mar. 3	Making pills.
Cockshott, J.	380	Jan. 31	Chemists dispensing apparatus.
" J.	3069	July 31	Dispensing apparatus for chemists.
Codd, H.	153	Jan. 14	Opening internal stoppered bottles.
" H.	2193	May 24	Bottles for aerated liquids.
Coe, W. J.	3730	Sep. 25	Safety-alarum for steam-boilers, &c.
Coggins, J., Baxter, G., & Greaves, [T. W.	927	Mar. 4	Crotchet hooks, &c., and handles.
Cogniet, C. (Sauvée)	4107	Oct. 24	Treating ozokerit for paraffin, &c.
Cohnfeld, S. G. (Pieper)	4593	Nov. 27	Feeding steam-boilers; forcing water.
Coignet, F. (De Pass)	1718	Apr. 22	Generating steam; economizing fuel.
Colborne, Hon. J., & St. George, T. C. B.	1119	Mar. 15	Motive-power engine.
Cole & Burnham, Co., Eaton; & [Clemens, M. (Tongue).	1389	Mar. 31	Hose and pipe nozzles.
Cole, H. J.	1411	Apr. 1	Siphon taps for bottles.
" H. J.	3586	Sep. 13	Cleansing ships' bottoms, &c.
" J.	4153	Oct. 26	Magnetic apparatus for curative purposes.
" J. & J.	382	Jan. 31	Skating-rink floors.
" J. & J.	851	Feb. 29	Roller or rink skates.
" J. & J.	1911	May 6	Roller or rink skates.
" J. C.	573	Feb. 12	Breaking, crushing, and grinding stones, &c.
" J. C.	3196	Aug. 12	Breaking, crushing, and grinding stones, &c.
" T. W., & Cashin, P. E.	2034	May 15	Electro-magnetic engine.
Coleby, T.	2915	July 17	Hydro-extractors.

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Colechin, W. G.	455	Feb. 4	Railway signals.
Coleman, E. J. (<i>Mazim</i>)	2810	July 10	Steam-engines.
" E. J., & Bird, F. J. (<i>Poole</i>)	2799	July 8	Spring "traveller" for ships.
" E. J., & Bird, F. J. (<i>Poole</i>)	2800	July 8	Hooks or couplings.
" E. J., & Bird, F. J. (<i>Pye</i>)	2801	July 8	Reaping and mowing machines.
" H. S.	4797	Dec. 12	Steam-boilers.
Coles, J.	3738	Sep. 25	Heating water for and saving fuel in steam- [engines]
" R. F., & Weatherdon, B. F.	1020	Mar. 9	Roller skates.
Colford, H., & Hawkesworth, D.	1154	Mar. 17	Spark-arrester.
Colket, G. H., Brown, J. A., & Fergus, J. [Johnson].	1352	Mar. 29	Injectors.
Collet, H., & Denans, J. B.	1610	Apr. 17	Regulating flow of liquids.
" H., & Denans, J. B.	3745	Sep. 25	Distributing, purifying, &c. flow of liquids.
Collett, J. K.	2638	June 27	Paving roads and footways.
Colley, E. E.	1692	Apr. 21	Winding, cutting, &c. paper.
Collier, G.	604	Feb. 14	Painting venetian blind laths, &c.
Collin, A. P. U. L. (Clark)	2049	May 15	Sharpening razors, &c.
Collingridge, A.	1260	Mar. 24	Wheel or roller skates.
Collins, E.	2629	June 26	Feeding-bottles.
" J.	229	Jan. 20	Iron and steel converting vessels.
" J.	4619	Nov. 29	Looms.
Collins, J. F. (Smith)	513	Feb. 9	Filling lamps, &c.
Collinson, H., & Gwynne, J. E. A.	1277	Mar. 25	Constructing retort lids, manhole covers, &c.
Collet, H.	1178	Mar. 18	Solitaires.
Colls, F. W.	2501	June 16	Gas-making.
Collyer, F.	1016	Mar. 9	Hair-brushing apparatus.
Coltman, T.	3409	Aug. 30	Thread layers and carriers for knitting-ma- [chine]
Colton, J. D., & Burrows, F. T.	2274	May 30	Desks for use in photography.
Colwell, L. (Clark)	4945	Dec. 22	Drying bone-black.
Combe, J.	2590	June 23	Winding cops.
Comber, W. A.	3199	Aug. 14	Pulley-blocks.
" W. A.	3928	Oct. 11	Fire-lighters.
Combettes, P. C. J. L. de (Vanden- [driesche]).	4036	Oct. 19	Gas-regulators for burners.
Comly, J. (Lake)	2532	June 19	Gear wheels.
Comte & Mabut, La Société & Jollis- [saint-Vonèche (Tongue)]	1476	Apr. 6	Textile leather.
Conant, H. (Coats)	4448	Nov. 17	Automatic fire-extinguisher.
Conant, T., & Whitney, E. R. (Haddan)	1401	Mar. 31	Grain-binders.
Conder, F. R.	1318	Mar. 27	Moving fluids; machines moved by fluids.
Condy, H. B.	628	Feb. 16	Chemical combination or purifier for bathing [purposes, &c.]
Coniam, T. T.	1695	Apr. 21	Reaping-machines.
Conisbee, W.	887	Mar. 2	Printing-machinery.
Conlong, J.	1214	Mar. 22	Steam-traps.
Connell, J. (<i>Cossit</i>)	3761	Sep. 27	Implement for cultivating land.
" W.	3338	Aug. 25	Printing-machinery.
Connolly, J. T.	2427	June 12	Cigar-holders and pipes.
Conquest, W. (<i>Hoe & Tucker</i>)	427	Feb. 2	Printing-machinery; cutting, folding, &c. [sheets]
" W. (<i>Tucker</i>)	543	Feb. 10	Folding paper.
" W. (<i>Tucker</i>)	3019	July 26	Folding paper.
" W. (<i>Tucker</i>)	4645	Nov. 30	Making up printed paper into books, news- [papers, &c.]
Consignations et de Transports, la [Société de Commission de (Johnson)]	4852	Dec. 15	Furnaces or fire-places.
Constable, J., & Thom, J.	308	Jan. 26	Topping, tailing, &c. turnips.
Converse, M. D. (De Pass)	408	Feb. 2	Drilling rock.
Conway, G.	1100	Mar. 14	Roller or rink skates.
Coode, Sir J.	2328	June 2	Dredging or removing sand, &c.
Cook & Porter Needle Co. (Hughes)	792	Feb. 25	Needle machines.

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Cook, E., & Jones, H. - - - - -	3555	Sep. 11	Rolling hoop-iron.
" H. W. - - - - -	2386	June 7	Utilizing heat as motive-power.
" H. W. - - - - -	4745	Dec. 7	Motive-power.
" R., & Dobson, A. J. - - - - -	490	Feb. 7	Railway carriage springs.
" S. - - - - -	3041	July 28	Wet-grates for looms.
" S. (Covel) - - - - -	2907	July 15	Sharpening saws.
" T. - - - - -	1236	Mar. 23	Compressing chlorides of soda, &c.
Cook, T. (Barlow) - - - - -	73	Jan. 7	Press for forming concrete, &c. blocks.
" T. (Barlow) - - - - -	75	Jan. 7	Making concrete, artificial stone, & fuel blocks.
Cook, W. - - - - -	3878	Oct. 7	Tools or cutters for shaping wood.
Cooke, G. K. (Haddan) - - - - -	2160	May 22	Hand printing stamps.
Cooke, W. H. - - - - -	4525	Nov. 22	Pegs for stringed instruments.
Cookson, N. C. - - - - -	708	Feb. 19	White lead.
" N. C. - - - - -	709	Feb. 19	White lead.
Cooper, A. - - - - -	1334	Mar. 29	Making and preparing counter-irritants.
" F. - - - - -	4598	Nov. 28	Finishing velvets, velveteens, &c.
" J. - - - - -	3208	Aug. 15	Lace-machinery.
" J. H. - - - - -	3944	Oct. 12	Snider rifles.
" S. A. - - - - -	20	Jan. 3	Fixing glass on building materials.
" W. - - - - -	1530	Apr. 11	Steam-generator.
" W., & Brooks, J. - - - - -	4268	Nov. 4	Anvils.
" W. J., Wanklyn, J. A., & Archbold, G. - - - - -	1172	Mar. 18	Distilling, &c. spirits.
Cope, E., & Maxwell, J. R. (Benson) - - - - -	629	Feb. 16	Steam-pump valves.
Copeland, C. J. (Waring) - - - - -	2189	May 24	Rock-drilling machines.
Copeland, G. W. (Lake) - - - - -	3892	Oct. 7	Lasting boots and shoes.
Coppin, W. - - - - -	1294	Mar. 25	Diving helmets and dresses.
Copping, G. H. (McLauchlan) - - - - -	2678	June 29	Printing and cutting lozenges.
Corani, E. (Ess) - - - - -	1007	Mar. 8	Adjusting height of seats, &c.
" E. (Ess) - - - - -	1122	Mar. 15	Boot-blackening stool.
Corbet, J. M. - - - - -	3283	Aug. 21	Attaching reels to fishing-rods.
Corbett, E. & E. - - - - -	1170	Mar. 18	Locking nuts on screw-bolts.
" J. W. - - - - -	3876	Oct. 6	Colouring bricks, pipes, tiles, &c.
Corbin, E. A., & Schmalz, L. E. (Johnson) - - - - -	4111	Oct. 24	Sugar-making.
Cordier, A. (Mouchot) - - - - -	4940	Dec. 21	Utilising sun's rays for heating purposes.
Cordingley, W. - - - - -	2919	July 17	Combustion of smoke.
Cornell, A. - - - - -	1433	Apr. 4	Roller skates.
Cornely, E. (Gedge) - - - - -	212	Jan. 19	Sewing and embroidering.
Cornforth, J. - - - - -	2415	June 12	Steam-boiler and other furnaces.
Corns, E. W. - - - - -	239	Jan. 20	Fastenings for scarves, &c.
Corr, W. T. - - - - -	5034	Dec. 29	New fabric, and manufacturing same.
Corrêa, J. S. - - - - -	2444	June 13	Propulsion of vessels.
Corrigan, J., & Stubbs, J. - - - - -	2579	June 22	Gassing and winding yarns.
" J., Stutter, E. H., & Stubbs, J. - - - - -	1347	Mar. 29	Threading eyes of shuttles.
" J., Stutter, E. H., & Stubbs, J. - - - - -	3870	Oct. 6	Threading eyes of loom shuttles.
Corron, C. (Lake) - - - - -	3476	Sep. 2	Dressing, &c. skeins or hanks of silk, &c.
Corseri, L., & Cozza, A. - - - - -	2168	May 22	Hydraulic break regulators.
Cory, E. - - - - -	1080	Mar. 11	Roller skates.
Cossins, G. H. (Cossins) - - - - -	4734	Dec. 7	Treating nickel ores for nickel and alloys, &c.
Cossins, J. A. (Cossins) - - - - -	4734	Dec. 7	Treating nickel ores for nickel and alloys, &c. [of same.]
Cossitt, L. (Connell) - - - - -	3761	Sep. 27	Implement for cultivating land.
Cosson, E. (Johnson) - - - - -	2816	July 11	Cartridges and explosive projectiles.
Costa, F. J. - - - - -	4219	Nov. 1	Suspending, raising, &c. venetian blinds.
Cotterill, T. - - - - -	2555	June 20	Utilising waste in galvanising iron.
Cotton, Sir A. - - - - -	1549	Apr. 12	Rotary-engines.
" J. R. - - - - -	2546	June 20	Plugs for smoking-pipes and tubes.
Coulson, J. - - - - -	2786	July 8	Traction-engines.
Coulter, A. (Barbour) - - - - -	1708	Apr. 22	Lubricating-cups.
Coulthard, J. W. - - - - -	1526	Apr. 11	Hot-water boilers.
" J. T. - - - - -	3126	Aug. 5	Safety-valves.
Couper, J., & Richardson, W. H. - - - - -	2817	July 11	Lenses.

Name.	Number of Application.	Date of Application.	Subject.
<i>Cour, P. la</i> (Jensen)	843	Feb. 29	Telegraphy.
<i>Courtaud, C.</i>	988	Mar. 8	Lift, ("ascenseur Courtaud.")
<i>Courtenay, J. M.</i> (Clark)	1764	Apr. 26	Automatic signal buoy.
<i>Courtney, J.</i>	4694	Dec. 5	Securing and registering checks, tickets, &c.
<i>Courtot, C. M.</i>	4035	Oct. 19	Transmitting acoustic signals.
<i>Cousin, C.</i>	2879	June 7	Indicating leakage in ships.
<i>Cousins, C., & Brown, J.</i>	1094	Mar. 13	Locking railway points.
" <i>C., & Brown, J.</i>	3352	Aug. 26	Locking railway facing points.
<i>Couvrete, G. H.</i> (Haddan)	1257	Mar. 24	Ships' rudders.
<i>Covel, W. L.</i> (Rollins)	179	Jan. 17	Sharpening saws.
" <i>W. L.</i> (Cook)	2907	July 15	Sharpening saws.
<i>Coventry, A., & Smith, W. F.</i>	3654	Sep. 19	Carriers, pedestals, pulleys, &c. for shafting; [counter-shafting; making shafts]
<i>Covert, H. W.</i> (Haddan)	4278	Nov. 6	Feeding presses with paper, &c.
<i>Cowan, J.</i>	913	Mar. 3	Heating steam-boilers.
<i>Cowdery, C.</i>	3037	July 28	Brakes for railway and other carriages.
<i>Cowell, H. A.</i> (Brown)	3932	Oct. 11	Pressing or shaping hats.
<i>Cowles, E.</i>	92	Jan. 8	Mixing liquid, semi-liquid, or pulverous sub- [stances]
<i>Cowley, W.</i>	342	Jan. 28	Generating, &c. carbonic acid.
<i>Cowper, E. A.</i>	259	Jan. 22	Floors of skating rinks.
" <i>E. A.</i>	2879	July 14	Audible alarms for safes.
" <i>E. A.</i>	3152	Aug. 9	Cutting coal.
" <i>E. A.</i>	3633	Sep. 16	Centrifugal machines.
<i>Coe, E. B.</i> (Green)	2876	July 14	Oil-stoves.
<i>Cox, J.</i>	3800	Sep. 29	Means of resisting cannon shot.
" <i>R. E.</i>	2214	May 25	Feeding printing-machines with paper.
" <i>S. F.</i>	2112	May 18	Finishing leather.
" <i>T. B.</i>	2512	June 17	Making steel lasting tacks.
<i>Coxeter, J. & S. J.</i>	2053	May 16	Batteries for surgical purposes.
" <i>S. J. & J.</i>	2053	May 16	Batteries for surgical purposes.
<i>Coxhead, F. C., & Steers, R.</i>	4646	Nov. 30	Making screw-heads.
<i>Coxon, J. N.</i>	2536	June 19	Determining angles of steam-engine eccentric, [setting out valves, &c.]
<i>Cozza, A., & Corseri, L.</i>	2168	May 22	Hydraulic break regulators.
<i>Crabtree, James, & Lee, J. D.</i>	2394	June 8	Looms.
" <i>James, S. & T.</i>	476	Feb. 5	Furnaces for steam-boilers, &c.
" <i>Joseph</i>	3351	Aug. 26	Deepening rivers, making water-courses; re- [moving deposits, &c. in same]
" <i>S., T. & J.</i>	476	Feb. 5	Furnaces for steam-boilers, &c.
" <i>T., J. & S.</i>	476	Feb. 5	Furnaces for steam-boilers, &c.
" <i>W.</i>	3179	Aug. 11	Looms.
<i>Craig, A.</i>	2245	May 29	Steam and other engines.
" <i>James</i>	1430	Apr. 4	Lamp sockets or fastenings.
" <i>John</i>	3337	Aug. 25	Connecting, &c. device for sewing-machine [driving wheels]
<i>Cramer, P.</i>	680	Feb. 18	Excavators.
<i>Crandall, J. N., & Fuller, J. B.</i> (Lake)	1557	Apr. 12	Magneto-electric machines.
<i>Crane, P. M.</i>	2221	May 26	Lubricating-oils.
" <i>T. S., & Hyatt, J. W.</i>	2523	June 17	Hydrostatic presses.
<i>Cranston, C., & Vanhorn, P.</i> (Lake)	2020	May 13	Paper-cutting machine.
<i>Cranston, W. McL.</i>	2991	July 24	Threshing and straw-binding machines.
" <i>W. McL.</i>	2998	July 25	Harvesting-machines.
" <i>W. McL., & Wood, W. A.</i>	783	Feb. 24	Mowing and reaping machines.
<i>Craven, J. J.</i> (Haddan)	3927	Oct. 11	Refrigerators or preserving chamber.
<i>Craven, T. E.</i>	323	Jan. 26	Mortising-machines.
<i>Crawford, W.</i>	3929	Oct. 11	Bleaching, washing and dyeing yarns.
<i>Crespin, A.</i>	707	Feb. 19	Ventilators or blowers.
<i>Crichley, H., & Mason, H. E. N.</i>	2518	June 17	Chandeliers and lamps.
<i>Crichton, A., & Dewar, W.</i>	3339	Aug. 25	Uprooting and shawing turnips.
<i>Crickmay, E., Farthing, W. T., & [Smale, W.]</i>	1554	Apr. 12	Building materials.
<i>Crim, W. T.</i> (Lake)	4044	Oct. 19	Street pavement.

Name.	Number of Application.	Date of Application.	Subject.
<i>Cristodoro, J., & Requa, E. B.</i> (Richards)	4406	Nov. 14	Nozzles for bottle-stoppers.
Crocker, G. T. O., & Barber, H. -	3311	Aug. 23	Sleigh for skating-rinks.
Crombie, D. - - - - -	4492	Nov. 20	Fire-lighters.
<i>Crompton, G.</i> (Morgan-Brown) -	2262	May 30	Fancy looms.
Cronbach, S. - - - - -	1515	Apr. 10	Passenger-register for tram-cars, &c.
Crooke, W., & Massicks, T. - -	659	Feb. 17	Slide-valves for pipes.
Crookes, T. - - - - -	767	Feb. 24	Pocket knives.
Crosby, W. K. - - - - -	3022	July 27	Roller skates.
Cross, C., & Simpson, J. E. - -	1187	Mar. 20	"Indian kutar" cloths.
" J. P. - - - - -	4223	Nov. 1	Singeing fabrics.
<i>Cross, J. R.</i> (Pearson) - - - -	4689	Dec. 4	Graining wood and other surfaces.
Cross, T., & Wood, T. H. - - -	1069	Mar. 11	Rink skates.
Crosse, R. - - - - -	1689	Apr. 21	Roller or rink skates.
Crossland, W., Westley, W., & Barnes, J.	4710	Dec. 5	Sizing and drying yarn and fabrics.
Crossley, F. W. - - - - -	132	Jan. 12	Gas-motor engines.
" F. W. & Bridgett, G. A. -	989	Mar. 7	Steam or other fluid pumps.
" S. - - - - -	2806	July 10	Dirt-collecting apparatus for cotton machinery.
Crowe, G., James, W., & Bromley, U.	4830	Dec. 14	Motive-power engines; pumps; water-meters.
<i>Crowell, L. C.</i> (Morgan-Brown) -	2457	June 14	Folding and delivering paper.
Crowley, J. S. - - - - -	4454	Nov. 17	Buckles and keepers, and connecting same; [travellers belts; uniting ends of straps, &c.
" J. S. - - - - -	4985	Dec. 23	Buckles and keepers, and connecting same; [travellers belts; uniting leather, &c.
Croysdale, W. - - - - -	4185	Oct. 28	Dyeing wool in indigo vats.
<i>Crozet, L. J.</i> (Smith) - - - - -	464	Feb. 4	Calendar watches.
Cruickshank, A. B. - - - - -	2284	May 30	Disengaging ships' boats.
Csete, J., & Du Vallon, G. - -	4859	Dec. 15	Artificial production of ice.
Cullen, D., & Dickinson, M. - -	4128	Oct. 25	Working slide-valves of engines.
Culross, D., & Edwardson, E. -	1785	Apr. 27	Printing-presses.
Cunningham, A. - - - - -	2709	July 1	Measuring-tapes.
" A. - - - - -	2710	July 1	Water-proof garments.
<i>Cunningham, P.</i> (Lake) - - - -	2345	June 3	Bomb-lances.
Curling, J. A. - - - - -	3705	Sep. 21	Wrought-iron or steel discs or wheels.
Curren, J. - - - - -	599	Feb. 14	Electric indicators.
Curtin, E. J., & Stothert, G. K. -	568	Feb. 12	Low-water alarms.
Curtis, J., & Wellington, D. - -	1432	Apr. 4	Tongues of ore-stampers.
<i>Curtis, T. A., Taylor, V. N., & Hovey,</i> [W. H. (Hughes)]	1827	May 1	Gas-light extinguisher.
Curzon, H., Page, G. G., & Powis, C.	216	Jan. 19	Constructing roofs.
Cutlan, F. - - - - -	2399	June 8	Roller skates.
" James (Cutlan) - - - - -	3344	Aug. 25	Boot and shoe sewing-machines.
<i>Cutlan, John</i> (Cutlan) - - - -	3344	Aug. 25	Boot and shoe sewing-machines.
Cutler, D. - - - - -	4297	Nov. 7	Solitaires, sleeve-links, studs, &c.
Cuttler, I. F. - - - - -	2179	May 23	Furniture castor.
Cuyer, E. - - - - -	3675	Sep. 20	Raising submerged ships or vessels.
D			
Dack, W. N. - - - - -	4337	Nov. 9	Steam-boilers.
<i>Daelen, V.</i> (Pieper) - - - - -	4091	Oct. 23	Transmitting rotary motion.
<i>Daillier, C.</i> (Japy) - - - - -	1135	Mar. 16	Computating cock for liquors.
Dailloux, C. E. - - - - -	868	Mar. 1	Turning boot and shoe heels.
Dale, W. J. - - - - -	447	Feb. 4	Convertible seats, desks, &c.
Dales, J. H., & Wynn, W. N. - -	2121	May 19	Window-sash fasteners.
Dallé, L. - - - - -	2491	June 15	Sewing and stitching gloves, &c.
Dallison, J. K. - - - - -	2400	June 9	Safety apparatus for learning skating.
Dalton, G. (Marsden) - - - - -	755	Feb. 23	Crushing and pulverising substances.
<i>Dalton, W. H.</i> (Lowe) - - - - -	3636	Sep. 16	Lamps for burning kerosine, &c.
Dalziel, T. B. - - - - -	3790	Sep. 29	Stoves, grates, &c. and flues of same.
Damala, P., & Tringuetta, C. - -	685	Feb. 16	Propelling steamers.

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<i>Danckerwerth, L. (Fixsen)</i>	1704	Apr. 22	India-rubber and gutta-percha.
<i>Dandrieux, Gravier et Cie. (Mewburn)</i>	3036	July 28	Flying or aerial toy.
<i>Daniel, E. R.</i>	2372	June 6	Making bar-iron.
<i>J. C.</i>	5044	Dec. 29	Kilns and bricks, tiles and quarries for same.
<i>Daniels, W., & Radway, R. G. (Jensen)</i>	2644	June 27	Umbrella and parasol frames.
<i>Danischewski, S.</i>	3461	Sep. 2	Invalid beds and bedsteads.
<i>S.</i>	4003	Oct. 17	Motive-power.
<i>Danks, J. R.</i>	3575	Sep. 12	Feeding cut-nail machines.
<i>Dann, J. T. (Flürscheim)</i>	2374	June 7	Lighting, extinguishing, &c. gas.
<i>J. T. (Beugger)</i>	4389	Nov. 13	Levelling rails of railways.
<i>J. T. (Symons & Rickard)</i>	4948	Dec. 22	Roasting furnaces.
<i>W. J.</i>	101	Jan. 8	Manufacturing hosiery.
<i>Darkin, F. (Camacho)</i>	52	Jan. 5	Electric-battery.
<i>Darlington, J.</i>	4045	Oct. 19	Percussive rock-boring machines.
<i>Dashwood, A., & Wenn, J. B.</i>	2580	June 22	Heating greenhouses, baths, &c.
<i>Da Silva, E. C. (Tongue)</i>	2558	June 21	Raising and forcing liquids.
<i>Dathis, L. (Clark)</i>	4202	Oct. 30	Rail and tramway locomotives, carriages, &c.
<i>Dato, G.</i>	627	Feb. 16	Showing rate, speed, &c. of locomotives.
<i>Daudier, et fils (Brewer)</i>	2505	June 16	Bleaching and purifying wool.
<i>Davenport, W. W.</i>	2024	May 13	Cutting lawn edges.
<i>Davey, H.</i>	2156	May 22	Compressing air, forcing water, &c.
<i>H.</i>	2814	July 11	Compound pumping engines.
<i>H.</i>	4180	Oct. 26	Hydraulic-engines.
<i>David, J. H. (Haddan)</i>	1979	May 11	Gaff fastenings for vessels.
<i>J. H. (Haddan)</i>	1995	May 12	Capstans.
<i>Davidson, D.</i>	3897	Oct. 9	Steam-boilers.
<i>G. G.</i>	45	Jan. 5	Dental articulators.
<i>Davies, E., Hamer, E., & Metcalfe, J.</i>	591	Feb. 14	Feeding steam-boilers and raising, &c. water.
<i>F., & Astley, J.</i>	1370	Mar. 30	Knitting healds.
<i>G.</i>	2655	June 27	Making tiles, paving-bricks and quarries.
<i>J.</i>	880	Mar. 1	Steering apparatus.
<i>J.</i>	3252	Aug. 18	Steam-engines.
<i>P. J.</i>	1179	Mar. 18	Closet and other valves.
<i>P. J.</i>	2181	May 23	Liquid-meters.
<i>T.</i>	2030	May 15	Sewing-machines.
<i>W.</i>	2011	May 13	Motive-power.
<i>W. B., & Chambers, J. E.</i>	691	Feb. 18	Roller skates.
<i>W. H., & Higgins, F. H. W.</i>	3361	Aug. 26	Instruments for signalling fire-alarms, &c.
<i>Davis, B. H. (Bird)</i>	4147	Oct. 25	Elevators.
<i>Davis, C. J., & Thomas, J. T. C.</i>	1795	Apr. 28	Railway and other lamps.
<i>E., & Fieldhouse, W.</i>	645	Feb. 16	Sinking, &c. pits and "sumps."
<i>F. H., & Tydeman, B.</i>	687	Feb. 18	Roller skates.
<i>G. D.</i>	4263	Nov. 4	Steering vessels.
<i>G. E., & Aitken, J. B.</i>	4048	Oct. 19	Treating phosphate of alumina, or of alumina [and iron, for products]
<i>G. E., Speakman, J. J., & Green-wood, A.</i>	3673	Sep. 19	Collecting and treating excreta, &c. for products
<i>H. T.</i>	4138	Oct. 25	Oiling roller skates, &c.
<i>H. T., & Barlow, W. A.</i>	1726	Apr. 24	Registering attachment for skates, &c.
<i>J. C., & Matthews, C. P.</i>	3563	Sep. 11	Composition for insides of casks, &c.
<i>L.</i>	3369	Aug. 28	Combined woollen and linen shirt.
<i>P. W.</i>	2695	June 30	Raising sunken ships, &c.
<i>Davis, R. W., & Pusey, C. J. (Reynolds)</i>	2560	June 21	Carriage wheels.
<i>Davison, R.</i>	1450	Apr. 5	Cleaning cotton seed.
<i>W.</i>	4692	Dec. 4	Brakes for railway and other purposes.
<i>W. R.</i>	496	Feb. 8	Fire-bars; fuel saving and consuming smoke.
<i>Davy, C.</i>	4648	Nov. 30	Straightening railway rails.
<i>Dawbarn, C. (Gano)</i>	3477	Sep. 4	Raising and lowering window-blinds.
<i>Dawes, W.</i>	1637	Apr. 19	Stamping or endorsing-machines.
<i>W.</i>	2141	May 20	Steam-engines.
<i>Dawson, D. R., Orchar, R., & Martin, W.</i>	1909	May 6	Sewing-machines.
<i>Dawson, G. E. L. (Gardner)</i>	2414	June 10	Fire-arms and projectiles.
<i>Dawson, T., & Allen, T.</i>	3926	Oct. 11	Dress fasteners.

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Day, C. A. (<i>Appel & Monmon</i>) - - -	3540	Sep. 8	Printing in various colors.
" J. - - - - -	3042	July 28	Rollers for roller-blinds, maps, &c.
" L. W. - - - - -	4728	Dec. 7	Stoppering bottles.
" S. J. V. (<i>Dubern</i>) - - - - -	3710	Sep. 22	Telegraphic instruments.
Deacon, C. F., & Young, F. - - -	3558	Sep. 11	Roller or wheel skates.
" G. F. - - - - -	2314	June 1	Valves for reducing, &c. fluid pressure.
" H. - - - - -	176	Jan. 17	"Close," "blind," or "muffle" furnaces.
" H. - - - - -	1927	May 8	Chlorine.
Deakin, J. - - - - -	2510	June 16	Cowls.
D'Alessandro, B. B. (<i>Hunt</i>) - - -	2965	July 21	Life-saving dress or garment.
" B. B. (<i>Hunt</i>) - - - - -	3906	Oct. 10	Travelling satchel or purse.
Dean, C. S. - - - - -	1040	Mar. 10	Steam-boiler tubes and flues.
" James - - - - -	4773	Dec. 9	Boots and shoes.
" John - - - - -	4583	Nov. 27	Fire-places; heat generators; taps.
" Joseph - - - - -	2252	May 29	Carding-engines.
" W., Orrah, A., & Brown, J. - -	1118	Mar. 15	Cutting pile fabrics.
" W., Orrah, A., & Brown, J. - -	4135	Oct. 25	Drawing, twisting, &c. fibres.
De Aragon, J. P. (<i>De La Torre y Montalbo</i>). - - -	4199	Oct. 30	Hand and sewing-machine needles.
Dearden, J. - - - - -	3325	Aug. 24	Spinning and doubling fibres.
Deavs, C. (<i>Lake</i>) - - - - -	983	Mar. 7	Gasaliers.
Deayman, W., & Evans, T. (<i>Brown</i>) - - -	2277	May 30	Washing fabrics.
De Bay, C. S. - - - - -	2577	June 22	Propelling ships.
De Beaumont, E. H. (<i>de la Bonninière Vicomte</i> (<i>Johnson</i>)). - - -	3451	Sep. 1	Vaults or arches and ventilating, &c. same.
De Bejary O'Lawlor, L., & Calvo, N. A. - - -	1303	Mar. 27	Electric-telegraphy.
Deboutteville, F. D. (<i>Newton</i>) - - -	1702	Apr. 21	Threads or yarns.
Debruge, L. T. (<i>Henderson</i>) - - - - -	3859	Oct. 6	Infants' feeding-bottles.
De Buigne, J. (<i>Wirth</i>) - - - - -	2979	July 22	Rollers for figured iron, &c.
De Carvalho, M. (<i>Bonneville</i>) - - - - -	653	Feb. 17	Electro-dynamic apparatus.
De Castro, J. R. V. (<i>Dufrené</i>) - - - - -	1821	May 1	Sewing-machine.
Decauville, P. (<i>Newton</i>) - - - - -	3020	July 26	Portable railways and rolling-stock, &c. for same.
De Choch, Count, G., & Bellotti, S. - - -	821	Feb. 28	Mending or fishing axles, shafts, &c.
De Combettes, P. C. J. L. (<i>Vanden driesche</i>). - - -	4036	Oct. 19	Gas regulator for burners.
Decoudun, J. (<i>Ball</i>) - - - - -	2717	July 1	Ironing and finishing linen, &c.
Deديو, F. (<i>Newton</i>) - - - - -	3159	Aug. 9	Stocking-supporter.
De Douhet, Count G. F. (<i>Lake</i>) - - - - -	428	Feb. 2	Making steel.
Dee, H. W. - - - - -	2812	July 11	Cigar and like cases.
" L. - - - - -	703	Feb. 19	Cigar and fuzee cases, purses, &c.
Deeley, E. - - - - -	2152	May 20	Metallic tubes.
D'Esplaviz, H. F. S. - - - - -	1858	May 3	Artificial manure.
De Faucheux d'Humy, P. R. - - - - -	553	Feb. 11	Making articles from glass, clay, &c.
" " P. R. - - - - -	4217	Oct. 31	Making, &c. articles of pottery and glass.
De Ferrari, G. B. fu Angelo, & Jarves, [J. J.] - - - - -	3830	Sep. 16	Heating steam-boilers, furnaces, &c.
Defries, H. - - - - -	2363	June 6	Glasses of railway carriage roof lamps.
De Guggenbühler, G. F. Coccapieller - - -	787	Feb. 24	Brakes for trains or vehicles.
" G. F. Coccapieller - - - - -	788	Feb. 24	Stopping vehicles and detaching horses there- [from.]
D'Haisne, G. - - - - -	3821	Aug. 21	Beds for the wounded and sick.
D'Halluin, D. H. L. (<i>Browne</i>) - - - - -	2515	June 17	Extracting oil and obtaining varnish.
De Hennault, Bros., & Guinotte, L. (<i>Lake</i>) - - -	4221	Nov. 1	Pressure indicator.
D'Herville, L. G., & Lippacher, I. [Browne]. - - - - -	3182	Aug. 11	Bathing apparatus; saving life.
D'Heureuse, R. (<i>Smith</i>) - - - - -	1684	Apr. 21	Mashing and disintegrating maize, &c.
Dehne, F., & Woolnough, G. (<i>Brewer</i>) - - -	2456	June 14	Moulding.
D'Humy, P. R. de Faucheux - - - - -	553	Feb. 11	Making articles from glass, clay, &c.
" P. R. de Faucheux - - - - -	4217	Oct. 31	Making, &c. articles of pottery and glass.
Deiss, A., & Scaife, R. - - - - -	2866	July 13	Purifying india-rubber, amber, resin, bitumen, [sulphur, &c.]
De Kierzkowski, C. F. - - - - -	3191	Aug. 12	Pressure generators; propelling tram-cars, &c.

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De Kinder, J., & Latour, F. C. . . .	565	Feb. 11	Steeping, bleaching, separating, &c. fibres [treating textile fabrics]
De La Bastie, F. B. A. Royer (Abel)	1908	May 6	Tempering glass bottles, &c.
De la Bonnière, E. H., Vicomte de [Beaumont (Johnson).	3451	Sep. 1	Vaults or arches and ventilating, &c. same.
De Lagillardaie, E. (Abel)	3839	Oct. 4	Inkstands.
Delair, L.	2514	June 17	Rink or ice skates.
Delamare, F. (Newton)	2016	May 13	Removing substances from textile fabrics.
Delamater, C. H., Robinson, G. H., & [Kennedy, De L. (Lake).	3207	Aug. 14	Punch or projectile.
De la Peyrouse, L. A. L. E. P. . . .	3209	Aug. 15	Gas-making.
De Laroque, E.	946	Mar. 4	Artificial marbles, &c.
De Lastelle, F. M.	2461	June 14	Candles.
De La Taste, P. M., & Leoni, F. . .	4953	Dec. 22	Ships and life-saving apparatus.
De La Torre y Montalbo, J. M. (De [Aragon).	4199	Oct. 30	Hand and sewing-machine needles.
Delatre, F. M.	1835	May 2	Life and other boats.
De Lavalette, J. A. A. C.	2662	June 28	A hydraulical motor.
Delebarre, Fauvelles, & Deschamps, [Maurey, & Co. (Abel).	2346	June 5	Toilet brushes and combs.
Delebèque, E., & Banderali, D. J. F. S. (Lake).	1524	Apr. 10	Stopping railway trains.
Delf, W., & Stidolph, G. F. & T. F.	2957	July 20	Cleaning and sorting seed, &c.
Delille, A., & Bouchacourt et Cie (Clark)	2702	June 30	Screw-threading rods, bolts, &c.
Dellagana, J.	1580	Apr. 13	Backing electro-type shells.
Delpêche, J., Fosty, J. B., & Chau-mette, A. (Browne).	3301	Aug. 22	Memorandum tablets.
Del Riego, F.	4863	Dec. 15	Stirrups.
De Macedo, J. A.	4836	Dec. 14	Egg-boiler.
Demaret, C., & Borgnet, C. (Murdoch)	860	Feb. 29	Combustion of solids, gases, &c.
De Mans, B. F. N. Fayolle (Gedge) .	4930	Dec. 21	Forging bolts.
Demblon, F. J.	232	Jan. 20	Steering vessels.
De Mersanne, F. E. (Johnson) . .	3315	Aug. 23	Producing electric-light for signalling, &c.
De Meyer, C. J., Ruidant, A., & [Mulders, P. J.	3726	Sep. 23	Composition or varnish.
De Michele, V. D.	4922	Dec. 20	Kiln flues for drying cement, slip or slurry.
Demonchaux, E.	2671	June 28	Embroidering handkerchiefs, &c.
De Montoisson, J. L.	4505	Nov. 21	Utilising scrap, old and waste leather.
De Mooij, C. (Newton)	2626	June 26	Suspending hammocks, cots, &c.
De Mouncie, Baron T.	3206	Aug. 14	Revolving pistols.
Baron T.	4163	Oct. 26	Revolving pistols.
De Müller, A. J. M.	2413	June 10	Tempering and toughening bottles, &c.
Denans, J. B., & Collet, H.	1610	Apr. 17	Regulating flow of liquids.
„ J. B., & Collet, H.	3745	Sep. 25	Distributing, purifying, &c. flow of liquids.
Den Berghe, P. L. van (Mills) . . .	911	Mar. 3	Casting metals under pressure.
Dence, J.	637	Feb. 16	Safety-apparatus for lifts.
Denham, C.	2622	June 24	Cutting leather.
Denis, J., & Remy, E.	3517	Sep. 7	Extracting starch from rice, &c.
Denne, M. C.	191	Jan. 18	Sewing-machines.
Dennis, W.	2240	May 27	Pumps for forcing water, air, and gases.
Dennison, J. W.	829	Feb. 28	Earthenware pipes.
„ J. W.	1161	Mar. 17	Paving for roads, ways, &c.
De Normanville, W.	2589	June 23	Ships' logs or speed indicators.
Dentellière de France, Compagnie [(Simon).	4101	Oct. 23	Making lace (Malhère's system).
Denton, J. B.	1891	May 5	Filtering or purifying water.
De Pass, E. (Hénard)	111	Jan. 11	Fire-arms.
„ E. (Converse)	408	Feb. 2	Drilling rock.
„ E. (Andrade)	772	Feb. 24	Steam-engine governors.
„ E. (Guerrant)	1344	Mar. 29	Electro-engraving machines.
„ E. (Coipnet)	1718	Apr. 22	Generating steam; economising fuel.
„ E. (Imbs)	2313	June 1	Combing fibres.
„ E. (Trouillet)	3154	Aug. 9	Perforating paper, card-board, metal, &c.

Name.	Number of Application.	Date of Application.	Subject.
De Pass, E. (<i>Bozérien</i>) - - - - -	4102	Oct. 23	Motive-power.
" " (<i>Leathers</i>) - - - - -	4881	Dec. 18	Artificial stone.
" " (<i>Racou</i>) - - - - -	5052	Dec. 30	Railway and tramway car brakes.
De Playter-Syberg, Count S. (Pitt) -	3181	Aug. 11	Making copper articles.
Der Haeghen Limelette, R. J. P. Van [<i>Newton</i>].	1068	Mar. 11	Vitreous colours.
Der Kelen, L. van - - - - -	4563	Nov. 25	Gas-stoves.
Dernoncourt, D. L. - - - - -	2347	June 5	Regulating draught in furnaces.
De Romanet, Viscount (<i>Bonneville</i>) -	1721	Apr. 24	Glazing, &c. walls, and compositions for same.
Derriey, J. J. (<i>Clark</i>) - - - - -	4080	Oct. 21	Newspaper printing and folding machines.
De Russett, E. W., & Chapman, C. -	118	Jan. 11	Constructing ships.
De Sa, P. - - - - -	22	Jan. 3	Chimney pot.
Deschamps, Maurey, & Co., & Fauvelle- [<i>Delebarre</i> (<i>Abel</i>)].	2346	Jan. 5	Toilet brushes and combs.
Deschamps, O. L. - - - - -	359	Jan. 29	Cutting threads of tulle, &c.
Desgoffe, J. A. - - - - -	3186	Aug. 12	Uprights for telegraph posts, chimneys, &c.
De Siccardi, Le Comte E. (<i>Gardner</i>) -	4081	Oct. 21	Submarine-telegraphy.
Detiaque, A. E. A. - - - - -	3946	Oct. 12	Covers for containing medicated substances.
De Torres, H. C. (<i>Morgan-Brown</i>) -	2968	July 21	Injector for steam-boilers.
Dérot, A. L. B. (<i>Rebour</i>) - - - - -	4889	Dec. 18	Roller skates.
Dérot, A. L. B., & Rebour, N. (<i>Wise</i>)	2744	July 4	Roller skate.
" A. L. B., & Rebour, N. (<i>Wise</i>)	2905	July 15	Utilising centrifugal force.
Dewar, J. - - - - -	2886	July 14	Electrometers; electric signalling, &c.
" W., & Crichton, A. - - - - -	3339	Aug. 25	Uprooting and shawing turnips.
Dewhurst, H. - - - - -	4425	Nov. 16	Embossing, &c. designs on fabrics.
Dewrance, J., & Mallinson, J. - -	4540	Nov. 22	Cocks.
De Zuccato, E. - - - - -	394	Feb. 1	Copying letters, writings, &c.
" E. - - - - -	1115	Mar. 15	Copying writings, &c.
Dick, J. M. - - - - -	1646	Apr. 19	Removing moisture from wool, &c.
Dickenson, W. - - - - -	2541	June 19	Electric-telegraphs.
Dickinson, H. - - - - -	1250	Mar. 23	Ornamenting wood surfaces.
" J. - - - - -	2840	July 12	Safety-valves.
" J. - - - - -	3809	Sep. 30	Drilling, &c. parts of boilers.
" M., & Cullen, D. - - - - -	4128	Oct. 25	Working side-valves of engines.
" W., Catlow, C., & Butter- [<i>worth</i> , J.].	2395	June 8	Looms.
" W., Catlow, C., & Butter- [<i>worth</i> , J.].	3840	Oct. 4	Looms.
Dickson, A. C. - - - - -	4151	Oct. 26	Looms.
Dietrich, C. (<i>Jensen</i>) - - - - -	214	Jan. 19	Bottle-stopper.
Dietz, J. M. (<i>Lotz</i>) - - - - -	534	Feb. 10	Portable lanterns.
Dietz-Monnin, C. F. (<i>Alexander</i>) -	1091	Mar. 13	Pocket alarms.
Dillon, T. A. - - - - -	3034	July 28	Raising, &c. submerged vessels or bodies.
Dimelow, J. - - - - -	1227	Mar. 22	Feeding cut-nail machines.
" J. - - - - -	2433	June 13	Feeders of cut-nail machines.
Dimock, I. (<i>Livsey</i>) - - - - -	3582	Sep. 13	Printing or embossing spools.
Dinant, A. (<i>Mewburn</i>) - - - - -	282	Jan. 25	Miners' safety-lamps.
Dion, C., & Baylis, J. (<i>Johnson</i>) -	3706	Sep. 21	Treating iron and steel.
Dissés-Leroy, L. (<i>Browne</i>) - - - -	69	Jan. 6	Preserving and waterproofing leather, canvass, [<i>string</i> , &c.]
Distin, H. J. - - - - -	762	Feb. 23	Substitute for castanet.
" H. J. - - - - -	3650	Sep. 18	Making substitute for castanet.
Ditchfield, J. - - - - -	1222	Mar. 22	Doubling and measuring cloth, &c.
Dix, W. J. - - - - -	3214	Aug. 15	Sealing corks of bottles, jars, &c.
Dixon, J. A. - - - - -	4728	Dec. 7	Flour and articles composed thereof.
" J. A., & Cobley, T. H. - - - -	1321	Mar. 28	Treating copper ores.
Dixon, J. W. (<i>Downing & Hughes</i>) -	1977	May 11	Making paper-pulp.
Dixon, R. - - - - -	2661	June 28	Dressing, dyeing, &c. furs, skins, and fibres.
Dixon, T. S. E. (<i>Barlow</i>) - - - - -	74	Jan. 7	Railway car axles.
Dobbie, A. - - - - -	2270	May 30	Indexing bibles and other books.
" J. - - - - -	2483	June 15	American stoves.
Dobson, A. J., & Cook, R. - - - - -	490	Feb. 7	Railway carriage springs.
" B. A., & Macqueen, J. - - - -	4149	Oct. 26	Preparing, spinning, &c., fibres.

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Dobson, B. A. & W., & Rushton, T. H.	3712	Sep. 22	Carding fibres.
" J., & McCardle, A. - - -	2842	July 12	Colour-printing machinery.
" T. - - - - -	1132	Mar. 16	Apparatus for miners' cages, &c.
" W. & B. A., & Rushton, T. H.	3712	Sep. 22	Carding fibres.
Dodé, J. B. A. (Johnson) - - -	2971	July 21	Coating or covering metals.
Dodge & Olcott (Ashmore) - - -	1106	Mar. 14	Baking powders.
Dodgshun, A., I. & E., Bryden, W., [& Wilkinson, J. W.]	4419	Nov. 15	Mixing or blending, &c. wools and fibres.
" E., A. & I., Bryden, W., [& Wilkinson, J. W.]	4419	Nov. 15	Mixing or blending, &c. wools and fibres.
" I., E. & A., Bryden, W., [& Wilkinson, J. W.]	4419	Nov. 15	Mixing or blending, &c. wools and fibres.
Dodson, W. - - - - -	130	Jan. 12	Piano-fortes.
Doisy, J. F. R., & Sarrazin, H. L. E.	965	Mar. 6	Boot-jack.
Dolby, T. G. F. - - - - -	155	Jan. 14	Screw-caps and hollow screws.
Dollander, E. (Johnson) - - -	1733	Apr. 24	Sizing and dressing yarn.
Domeier, A., & Baumgarten, F. W. A.	4575	Nov. 25	Umbrellas, parasols and sunshades.
Domercq, E. - - - - -	705	Feb. 19	Iron bedstead.
" E. - - - - -	706	Feb. 19	Pail or bucket.
Donaldson, R., & Taylor, J. - - -	3754	Sep. 26	Winch or windlass for fishing-boats, &c.
Donisthorpe, W. - - - - -	4344	Nov. 9	Photographic apparatus.
Donna, J., & Viglino, J. (Morgan- [Brown].)	3443	Sep. 1	Hydro-piro-pneumatic pump.
Donnaven, J. N. - - - - -	1701	Apr. 21	Roller skates.
Dooley, J. E. - - - - -	516	Feb. 9	Taps for steam or hot fluids.
Dore, W., Tapley, J. P., & Wilson, C.	3167	Aug. 10	Sewing-machines.
Doremus, W. T. (Clark) - - -	1485	Apr. 7	Chairs.
" W. T. (Clark) - - - - -	3081	Aug. 1	Cases for sash-pulleys, door-rollers, &c.
Dorendorff, R. (Blanche & Fricke) -	2562	June 21	Engine-counters; registering, &c.
Dornan, Annie J. & R., & Penley, [S. H. (Lake).]	1010	Mar. 8	Making veneers.
" R. & Annie J., & Penley, [S. H. (Lake).]	1010	Mar. 8	Making veneers.
Dorward, P., Peall, O. F., & Roy, J. W.	2359	June 6	Composition for curing plants of insects, &c.
Doty, H. H. (Morgan-Brown) - - -	893	Mar. 2	Lamp burners.
Double, G. - - - - -	3825	Oct. 3	Drilling braces; imparting rotary motion.
Doubleday, H. H. (Newton) - - -	2929	July 18	Stopper for bottles, cans, &c.
Doubler, J. (Byron) - - - - -	995	Mar. 8	Motive-power.
Douchy, A., Lemaire- (Alexander) -	2107	May 18	Ascertaining composition of air in mines.
Dougall, J. D. - - - - -	3748	Sep. 25	Cartridges.
Douglas, R., & Grant, L. - - -	2860	July 13	Motive-power engines.
" W. H. - - - - -	3616	Sep. 15	Studs or clasps.
" W. H., & Pearce, H. - - -	3113	Aug. 4	Studs and solitaires.
" W. R. - - - - -	1416	Apr. 1	Raising and lowering boats.
Douhet, Count G. F. de (Lake) - -	428	Feb. 2	Making steel.
Dowding, J. - - - - -	1428	Apr. 3	Paving and materials for same.
" J. - - - - -	1804	Apr. 28	Paving streets, roads, &c.
Dowie, A. L. - - - - -	1899	May 5	Smelting zinc and other ores.
Downing, G. (Mouckton) - - -	2522	June 17	Treating vegetable fibres and applying same.
" N. B., & Hughes, J. E. [(Dizon).]	1977	May 11	Making paper-pulp.
" N. B., & Hughes, J. E. [(Hughes).]	4008	Oct. 17	Evaporating alkaline solutions.
Driffin, J. - - - - -	1793	Apr. 28	Railway signals.
Drake, C. - - - - -	4121	Oct. 24	Concrete buildings and facing-tiles.
Drake, E., & Wright, J. H. (Lake) -	3842	Oct. 4	Uniting leather; sewing boots, harness, &c.
Draper, H. V. P. & Groat, B. P. (Lake).	108	Jan. 10	Lubricating compounds.
Draper, M., & Handley, W. - - -	899	Mar. 2	Fastenings for boots, gloves, &c.
" O. M., & Draper, V. - - -	2647	June 27	Chain swivels and making same.
Draper, V. & Draper, O. M. - - -	2647	June 27	Chain swivels and making same.
Dredge, F. - - - - -	3557	Sep. 11	Preventing trousers "bagging."
" J., & Maw, W. H. - - -	3526	Sep. 7	Pressure-gauges and pyrometers.
Dreie, R. W. (Haddan) - - - - -	49	Jan. 5	Lubricating oil cups.

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<i>Dreyer & Schipmann</i> (Mills) - - -	2324	June 2	Communicating motion to machines.
<i>Dreyfus</i> , C. - - - - -	4340	Nov. 9	Dyeing and printing.
<i>Drinen</i> , G. C., <i>Kehoe</i> , J., & <i>Shanley</i> , [T. J. (Clark).]	2260	May 29	Beer taps.
<i>Driot & Thomasset</i> (Lake) - - -	4750	Dec. 8	Testing resistance of materials to tension, &c.
<i>Drossbach</i> , M. (von Nawrocki) - -	4394	Nov. 13	Preparing flax, hemp, jute, &c.
<i>Drouyer</i> , J. M. - - - - -	2609	June 24	Mincing-machine.
<i>Drucker</i> , E. (Morgan-Brown) - - -	1239	Mar. 23	Braces or suspenders.
<i>Drummond</i> , D. - - - - -	4086	Oct. 23	Railway brakes.
<i>Dry</i> , J. R., & <i>Anderson</i> , S. - - -	4921	Dec. 20	Treating, opening, &c. flax and other fibres.
<i>Dryhurst</i> , J., & <i>Woodward</i> , J. - -	3189	Aug. 12	Door, window and show plates and labels.
<i>Drysdale</i> , R. - - - - -	3354	Aug. 26	Fabrics for insertions, edgings, &c.
<i>Dubern</i> , G. - - - - -	1298	Mar. 25	Telegraphic instruments.
<i>Dubern</i> , G. (Day) - - - - -	3710	Sep. 22	Telegraphic instruments.
<i>Du Bled</i> , A., & <i>Dujardin</i> , C. (Haddan)	2964	July 21	Waterproofing substances.
<i>Dubois</i> , J. L. - - - - -	401	Feb. 1	Cocks or taps.
<i>Dubue</i> , P. (Brookes) - - - - -	963	Mar. 6	Sewing-machines.
<i>Duchamp</i> , P. (Tongue) - - - - -	373	Jan. 29	Lamps.
<i>Duché</i> , C. A. S. - - - - -	2012	May 13	Roller skate.
<i>Duchemin</i> , E. M. (Clark) - - -	1903	May 5	Ship and other compasses.
<i>Duchez</i> , J., <i>Bondiger</i> , J., & <i>Dussaud</i> , P. J. [& J. (Hunt).]	1839	May 2	Tanning.
<i>Duck</i> , J., & <i>Hancock</i> , D. - - - -	4794	Dec. 11	Ball, bib and other valves.
<i>Duckett</i> , J. D. - - - - -	3319	Aug. 24	Water-waste preventer.
<i>Duclos</i> , P. Christian - - - - -	4398	Nov. 13	Stoppers for bottles, jars, &c.
<i>Ducomet</i> , J. (Quennesson) - - -	943	Mar. 4	Expressing sugar-cane juice, &c.
<i>Ducos</i> - <i>Duhauron</i> , L. (Morgan-Brown)	2973	July 22	Photography in colours.
<i>Duddell</i> , G. - - - - -	110	Jan. 10	Roller skates.
„ G., & <i>Charlton</i> , T. - - -	3543	Sep. 8	Drawing and forcing water, &c.; propelling [vessels.]
<i>Dufort</i> , J. H. (Clark) - - - - -	2368	June 6	Steam and other turbines.
<i>Dufrené</i> , H. A. (<i>De Castro</i>) - - -	1821	May 1	Sewing-machine.
„ H. A. (<i>Grelière</i>) - - - - -	4175	Oct. 28	Attaching samples to cards.
<i>Dugard</i> , W. H. - - - - -	4916	Dec. 20	Fans for blowing, &c.; centrifugal pumps.
<i>Duggan</i> , T., & <i>Jesson</i> , T. - - -	3026	July 27	Brooms and brushes.
<i>Duhamel</i> , Jenny, & <i>Fassin</i> , Octavie (Johnson).	4400	Nov. 13	Cooking-apparatus.
<i>Duhauron</i> , L. <i>Ducos</i> - (Morgan-Brown)	2973	July 22	Photography in colours.
<i>Dujardin</i> , C., & <i>Du Bled</i> , A. (Haddan)	2964	July 21	Waterproofing substances.
<i>Du Laney</i> , G. L. (Morgan-Brown) -	1137	Mar. 16	Sewing-machines.
<i>Dummer</i> , W. - - - - -	1070	Mar. 11	Waterproof compositions.
<i>Du Mont</i> , H. D. (Alexander) - - -	4363	Nov. 11	Paving roads, &c. and treating wood.
<i>Dumonthier</i> , C. (Clark) - - - -	4825	Dec. 13	Walking-stick guns.
<i>Dunbar</i> , J. - - - - -	638	Feb. 16	Bush keys for removing bushes.
<i>Duncan</i> , G. - - - - -	593	Feb. 14	Finishing printed paper.
„ G., & <i>Wilson</i> , W. A. & G. A. -	2908	July 15	Folding paper.
„ J. (<i>Fesca</i>) - - - - -	2269	May 30	Friction couplings.
„ J., & <i>Newlands</i> , B. E. R. - - -	2685	June 29	Treating and purifying sugar, &c.
„ J., & <i>Newlands</i> , J. A. R. & [B. E. R.]	2690	June 30	Sulphate of alumina.
„ J., & <i>Newlands</i> , J. A. R. & [B. E. R.]	2707	July 1	Sulphate of alumina.
„ J. W. - - - - -	2581	June 22	Fire-arms.
„ T. - - - - -	549	Feb. 11	Belting for machinery.
<i>Dunlop</i> , A., & <i>Munro</i> , A. & B. - -	142	Jan. 13	Cutting, shaping, and polishing stone, &c.
<i>Dunn</i> , R. - - - - -	2780	July 7	Railways.
„ T. - - - - -	4142	Oct. 25	Indicating revolutions of wheels, &c.
„ W. W. - - - - -	2208	May 25	Drilling or boring rocks.
<i>Dupont</i> , A. P. - - - - -	3721	Sep. 23	Cutting buttons, counters, lotos, &c.
<i>Dupont</i> , L. A. <i>Quinquarlet</i> - (Brewer) -	204	Jan. 19	Sewing hosiery, &c.
<i>Dupré</i> , P. S. E., <i>Rogé</i> , H. N., <i>Poret</i> , [E., & <i>Baffoy</i> , P. H. (Clark).]	3823	Oct. 3	Treating grain, plants, &c. for preserving same.
<i>Duprez</i> , C. A. (Tasker) - - - -	3468	Sep. 2	Cleansing and purifying grain.

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<i>Durand, A., & Admant, J. B.</i> (Brewer)	2955	July 20	Rink or roller-skates.
„ <i>F., Marais, E. L., & Whiel-</i> [don, W.]	654	Feb. 17	Pressing or moulding bricks.
<i>Durham, F. W., & Howse, H.</i> - -	2128	May 19	Governors and speed-indicators.
<i>Duroux, L. J.</i> (Morgan-Brown) - -	2001	May 12	Purifying turpentine spirit.
<i>Dussaud, J. & P. J., Duchez J., &</i> [Bendiger, J. (Hunt).]	1839	May 2	Tanning.
„ <i>P. J. & J., Duchez, J., &</i> [Bendiger, J. (Hunt).]	1839	May 2	Tanning.
<i>Dussud, J. A., & Testacuzzi, A.</i> (Lake)	5019	Dec. 28	Umbrellas.
<i>Dutemple, Knight, & Farinaux</i> [(Browne).]	2241	May 27	Stone-breaking machine.
<i>Du Temple, J. M. F.</i> (Vaughan) - -	2003	May 12	Steam-boilers.
<i>Duthie, J.</i> - - - - -	3725	Sep. 23	Windlass for fishing and other boats.
„ <i>R.</i> - - - - -	2101	May 18	Drawing or setting out ships' lines, &c.
<i>Dutton, W. H.</i> - - - - -	3664	Sep. 19	Boot and shoe soles.
<i>Du Vallon, G.</i> - - - - -	4254	Nov. 3	Using chains in pulley-blocks.
„ <i>G.</i> - - - - -	4266	Nov. 4	Steam-engine valves and working same.
„ <i>G., & Csete, J.</i> - - - - -	4859	Dec. 15	Artificial production of ice.
<i>Dwyer, E.</i> - - - - -	2939	July 19	Lamps.
<i>Dyer, H.</i> - - - - -	598	Feb. 14	Making paper-pulp.
<i>Dyson, E.</i> - - - - -	71	Jan. 7	Paving-blocks.
„ <i>H. H., & Hobson, F.</i> - - - -	4914	Dec. 20	Rolling rails for spring-steel and bars.
„ <i>J.</i> - - - - -	2047	May 15	Square for cutters-out.
E.			
<i>Eager, G. B.</i> (Newton) - - - - -	2303	May 31	Pantaloon, &c.
<i>Eagles, W.</i> - - - - -	1484	Apr. 7	Delivery-pipe for fire-extinguishers.
<i>East, T. B.</i> (Simmons) - - - - -	4502	Nov. 21	Atmospheric or aerating churns.
<i>Eastwood, J.</i> - - - - -	2826	July 11	Combing fibres.
„ <i>J., & Kennedy, M.</i> - - - - -	2233	May 27	Rock-drilling machinery.
<i>Eaton Cole & Burnham Co., & Clemens,</i> [M. (Tongue).]	1389	Mar. 31	Hose and pipe nozzles.
<i>Edel, E.</i> - - - - -	2133	May 20	Trusses.
<i>Edersheim, J.</i> - - - - -	1677	Apr. 21	Safety-apparatus for skaters.
<i>Edgar, J., & Bardell, A.</i> (Bonneville)	4732	Dec. 7	Frying-pans.
<i>Edgcome, T. L. B.</i> - - - - -	685	Feb. 18	Cleansing and drying bottles.
„ <i>T. L. B.</i> - - - - -	686	Feb. 18	Cleansing and drying bottles.
<i>Edge, J. S.</i> - - - - -	2150	May 20	Fire-arms.
<i>Edison, T. A.</i> - - - - -	3012	July 26	Aconstic-telegraphs.
<i>Edmondson, J. S.</i> - - - - -	2063	May 16	Slides for openings, windows, fire-places, &c.
<i>Edwards, A.</i> - - - - -	1885	May 5	Boot-cleaning machine.
„ <i>A. & E., & Hammond, E. C.</i>	1840	May 2	Roller skates.
„ <i>Edmund</i> - - - - -	1131	Mar. 16	Roller skates.
„ <i>Edmund (Moorhouse)</i> - - - -	2068	May 16	Steam-engines.
„ <i>Edmund & A., & Ham-</i> [mond, E.C.]	1840	May 2	Roller skates.
„ <i>Enoch, & Shaw, H.</i> - - - - -	3031	July 27	Metallic pens.
„ <i>J.</i> - - - - -	914	Mar. 3	Railway safety signals.
„ <i>J., & Breffit, E.</i> - - - - -	1025	Mar. 9	Bottle-stoppers; filling, &c. bottles.
„ <i>J., & Breffit, E.</i> - - - - -	4339	Nov. 9	Bottle-stoppers.
<i>Edwards, O.</i> (Lake) - - - - -	3045	July 28	Oil-burning stoves.
„ <i>R. L., Lucas, A. H., &</i> [Prince, L. F. (Newton)]	4308	Nov. 7	Egg-boxes or cases.
<i>Edwardson, E., & Culross, D.</i> - -	1785	Apr. 27	Printing-presses.
<i>Eccleston, W.</i> (Hughes) - - - - -	4978	Dec. 23	Table-cutlery.
<i>Egerton, H. A.</i> - - - - -	3316	Aug. 23	Floating piers.
<i>Egger, M.</i> (Lake) - - - - -	4595	Nov. 28	Electro-magnetic engines.
<i>Ehrhardt, L. H. G.</i> (Hunt) - - -	3103	Aug. 3	Treating postage and revenue stamps, &c.
<i>Ehrlich, P.</i> (Pieper) - - - - -	4096	Oct. 23	Musical instruments.

Name.	Number of Application.	Date of Application.	Subject.
<i>Eicken, Asbeck, Osthaus, & Co.</i> (von [Nawrocki]).	2689	June 29	Armour plates.
„ <i>Asbeck, Osthaus, & Co.</i> (von [Nawrocki]).	2704	July 1	Uniting iron and steel.
<i>Eickhoff, C. & R., & Ardelt, R.</i> (Pieper)	4673	Dec. 2	Safety-apparatus for hoisting-cages.
„ <i>R. & C., & Ardelt, R.</i> (Pieper)	4673	Dec. 2	Safety-apparatus for hoisting-cages.
Elce, J. - - - - -	151	Jan. 14	Preparing cotton and other fibres.
„ J. - - - - -	2843	June 27	Spinning and doubling.
„ J. - - - - -	4148	Oct. 26	Spinning and doubling.
Eldridge, G. - - - - -	942	Mar. 4	Roller skates.
Elers, C. G., Allix, G., & Barrett, H.	1798	Apr. 28	Roller or rink skates.
<i>Eliaers, A. E.</i> (Clark) - - - - -	2900	July 14	Folding chairs, &c.
<i>Ellenberger, G.</i> (Wirth) - - - - -	3724	Sep. 23	Mashing, &c. materials for distilleries.
Ellington, E. B. - - - - -	2250	May 29	Capstans.
Elliot, R., Pye-Smith, A., & White, O. W.	1273	Mar. 24	Stable-fittings and paving.
Elliott, A., & Burnett, C. - - - - -	847	Feb. 29	Actuating &c. valves.
„ A., & Burnett, C. - - - - -	1582	Apr. 13	Steam and other valves.
„ A., & Burnett, C. - - - - -	4465	Nov. 18	Raising water and other liquids.
„ C. F., & Bayley, J. - - - - -	3322	Aug. 24	Stud for fastening zinc sheets, &c.
„ G. W., & Macdermott, M. - - - - -	1346	Mar. 29	Wedge for breaking away coal, &c.
„ G. W., & Macdermott, M. - - - - -	4767	Dec. 9	Implement for breaking down coal, &c.
Ellis, G., & Jones, T. H. - - - - -	1421	Apr. 3	Dressing slates.
„ G. H. - - - - -	233	Jan. 20	Portable skating floor.
<i>Ellis, J.</i> (Clark) - - - - -	136	Jan. 12	Screw-propellers.
Ellis, S. - - - - -	3089	Aug. 2	Washing, dyeing, and sizing yarns, &c.
Elrick, C. G. - - - - -	1715	Apr. 22	Hair-fasteners.
Elsley, T. - - - - -	2006	May 12	Securing knobs to spindles.
Elston, S. S., & Benson, C. - - - - -	2871	July 13	Envelopes used in making oil-cake.
Elwell, P. B. - - - - -	4666	Dec. 2	Cut-nail and cut-tack machinery.
<i>Empire Vacuum Brake Co.</i> (Johnson)	1538	Apr. 11	Air-brakes and ejectors.
Emsley, S., & Smith, S. - - - - -	166	Jan. 15	Winding and gassing yarns.
„ S., & Smith, S. - - - - -	1073	Mar. 11	Doubling and twisting.
„ S., Smith, S., & Berry, B. - - - - -	343	Jan. 28	Spinning.
<i>Endrès, F. J.</i> (Brewer) - - - - -	1493	Apr. 7	Roller or rink skates.
Entwisle, J., & Souter, W. - - - - -	2692	June 30	Dressing, &c. silk waste and tow.
Entwistle, L., Whitaker, W. A. & [O. L., & Pearson, J.]	3838	Oct. 4	Spinning fibres.
<i>Erdmann, F.</i> (Hughes) - - - - -	443	Feb. 3	Shuttle spindles.
Ermatinger, J. H. (Sacc) - - - - -	423	Feb. 2	Preserving eggs.
Ermen, E. & G. A. - - - - -	4587	Nov. 27	Lamps.
„ G. A. & E. - - - - -	4587	Nov. 27	Lamps.
Erskine, F. - - - - -	1811	Apr. 29	Steam-boiler furnaces, gas-making, ventilating [mines, purifying vapours.
„ F. - - - - -	3877	Oct. 7	Furnaces and fire-bars for same.
Eskrett, C., & Searle, W. H. - - - - -	3185	Aug. 11	Wrappers or envelopes for seed-crushing.
Esplaviz, H. F. S. d' - - - - -	1856	May 3	Artificial manure.
<i>Ess, J.</i> (Corani) - - - - -	1007	Mar. 8	Adjusting height of seats, &c.
„ J. (Corani) - - - - -	1122	Mar. 15	Boot blacking stool.
Essery, R. A. - - - - -	2573	June 22	Railway breaks.
<i>Essex, J.</i> (Newton) - - - - -	199	Jan. 18	Cop-tubes.
„ J. (Lake) - - - - -	4748	Dec. 7	Spindles and bobbins.
Ettlinger, J. - - - - -	4865	Dec. 16	Easels.
„ W. (Shillinger) - - - - -	3084	Aug. 2	Concrete pavement.
<i>Eureka Skate Co.</i> (Thompson) - - - - -	1262	Mar. 24	Skates.
<i>Evans, C. A.</i> (Lake) - - - - -	2561	June 21	Indicating stations in railway carriages, &c.
Evans, G., & Swain, R. - - - - -	4074	Oct. 21	Fire-proof floors and roofs.
„ I. - - - - -	3912	Oct. 10	Braces for trousers.
„ J., & Harrison, A. - - - - -	2530	June 19	Stereotyping apparatus.
„ L. E. - - - - -	3296	Aug. 22	Fences and materials for same.
„ T., & Deayman, W. (Brown) - - - - -	2277	May 30	Washing fabrics.
„ W., & Strick, J. - - - - -	626	Feb. 16	Disintegrators.
Everest, H., & Winchester, W. H. B.	1583	Apr. 13	Ordnance and firing same; projectiles.
„ H., & Winchester, W. H. B.	4061	Oct. 20	Roller-blinds.

Name.	Number of Application.	Date of Application.	Subject.
Everett, C. H., - - - - -	3669	Sep. 19	Seat.
Everitt, W. E. - - - - -	3230	Aug. 16	Steam-boilers.
" W. E. - - - - -	4670	Dec. 2	Treating copper and copper alloys.
Ewart, G. - - - - -	2513	June 17	Gas-heating apparatus.
Ewart, W. D. (Lake) - - - - -	2752	July 5	Driving chains for machinery.
Eyland, E. S. - - - - -	733	Feb. 22	Roller skates.
" E. S. - - - - -	3300	Aug. 22	Roller skates.
Eyles, G. & W. H. - - - - -	753	Feb. 23	Raising trains, &c. and stopping same.
" W. H. & G. - - - - -	753	Feb. 23	Raising trains, &c. and stopping same.
" S. - - - - -	2843	July 12	Canisters and cans for paints, &c.
Eyre, H. S. - - - - -	790	Feb. 25	Screw-propellers.
" H. S. - - - - -	1089	Mar. 14	Screw-propellers.
Eyth, M., & Grieg, D. - - - - -	2633	June 26	Steam-engine air-condensers.
" M., Grieg, D., & Waite, P. - - - - -	802	Mar. 2	Moving land.
Ezard, C., & Wallace, J. - - - - -	5043	Dec. 29	Flat or smoothing irons.
F.			
Facio, E. E. S. (Brewer) - - - - -	3462	Sep. 2	Obtaining light by electricity.
Fahie, J. A. (Fahie) - - - - -	433	Feb. 3	Electric-telegraphs; electro-magnets.
" J. A. (Foster) - - - - -	3808	Sep. 30	Closing doors and gates.
Fahie, J. J. (Fahie) - - - - -	433	Feb. 3	Electric-telegraphs; electro-magnets.
Fahnehjelm, G. - - - - -	4075	Oct. 21	Explosive compound.
Falkman, C. (Steenberg) - - - - -	4926	Dec. 20	Apparatus for use in distilleries.
Fanning, J., Kalbfiesch, F. W., & [Sheffield, G. V. (Morgan). - - - - -	2722	July 1	Boots and shoes; uniting leather, &c.
" J., Sheffield, G. V., & Kalbfiesch, F. W. (Morgan). - - - - -	3437	Aug. 31	Sewing-machines for leather, &c.
Farcot et fils, La Société (Wise) - - - - -	1949	May 9	Steam-engines.
Fargue, L. (Clark) - - - - -	477	Feb. 5	Fountain pens.
" L. (Clark) - - - - -	4260	Nov. 3	Writing pen.
Farinaux, Dutemple, & Knight (Browne) - - - - -	2241	May 27	Stone-breaking machine.
Farjon, A. (Brookes) - - - - -	2378	June 7	Taking samples of grain, sugar, &c.
" C. E. (Brookes) - - - - -	2963	July 21	Copying and other presses.
Farmer, J. - - - - -	2675	June 29	Delivering, &c. printed sheets of paper.
" J. - - - - -	4168	Oct. 27	Letter-press printing-machines.
Farnham, F. G. (Clark) - - - - -	296	Jan. 25	Glove fastening.
" F. G. (Haddan) - - - - -	1983	May 11	Fastenings for gloves, &c.
Farquhar, A. A. (Farquhar) - - - - -	3985	Oct. 14	Rolling tea-leaves.
Farquhar, J. A. (Farquhar) - - - - -	3985	Oct. 14	Rolling tea-leaves.
Farran, J., & Walsh, J. - - - - -	3653	Sep. 19	Self-acting mules.
Farrell, H. C. - - - - -	2084	May 17	Entry & registering apparatus for tram-cars, &c.
Farthing, W. T., Smale, W., & Crick- [may, E. - - - - -	1554	Apr. 12	Building materials.
Fassin, Octavie, & Duhamel, Jenny (Johnson). - - - - -	4400	Nov. 13	Cooking-apparatus.
Fathers, B. - - - - -	2116	May 19	Marking lawn-tennis divisions, &c.
Faucher, F. - - - - -	2750	July 5	Brake for runaway horses.
Fancheux d'Humy, P. R. de - - - - -	553	Feb. 11	Making articles from glass, clay, &c.
" P. R. de - - - - -	4217	Oct. 31	Making, &c. articles of pottery and glass.
Faulkner, C., & Lloyd, F. H., W. E. [& W. H. - - - - -	1158	Mar. 17	Steel, iron, and other tubes.
" J. - - - - -	2171	May 23	Gas-lighting.
" J. A., & Starling, J. H. - - - - -	3174	Aug. 11	Attaching knobs, &c. to spindles.
Faure, C. A. - - - - -	3670	Sep. 19	Thermo-electric generators; electro-motors.
" C. A., Trench, G., & Mackie, S. J. - - - - -	2742	July 4	Explosives.
Faure, H. (Brewer) - - - - -	4812	Dec. 13	Checking and registering fares in vehicle.
Fauvelle-Delebarre, & Deschamps, [Maurey, & Co. (Abel). - - - - -	2346	June 5	Toilet brushes and combs.
Fawerkamp, B. - - - - -	504	Feb. 8	School desks.

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<i>Faxon, J. H.</i> (Hayne) - - - - -	931	Mar. 4	Steam-boiler tubes and flues.
<i>Fayolle de Mañs, B. F. N.</i> (Gedge) -	4930	Dec. 21	Forging bolts.
<i>Feather, T.</i> - - - - -	3198	Aug. 14	Compressing air.
<i>Feeny, V. I.</i> - - - - -	4843	Dec. 14	Registering passengers and fares in conveyances, &c.
<i>Felix, J., & Moulin, F.</i> (Newton) -	3033	July 27	Burning noxious gases, &c.
<i>Fell, J. C., & Marsh, J. & T.</i> - - -	1815	May 1	Lubricating spindles.
<i>Fenby, H. P., & Greenwood, A.</i> - - -	648	Feb. 16	Cut-nail machinery.
<i>" J. B.</i> - - - - -	1894	May 5	Engraving and carving.
<i>" J. B.</i> - - - - -	2711	July 1	Painting-easels, &c.
<i>Fenenga, W.</i> - - - - -	4555	Nov. 23	Plugging boiler tubes.
<i>Fenton, W.</i> - - - - -	1717	Apr. 22	"Teasing," "dulcing," &c. fibres.
<i>" W., & Thornton, J., J. & A.</i> -	1442	Apr. 4	Spinning fibres.
<i>" W., & Thornton, J., J. & A.</i> -	2026	May 13	Spinning fibres.
<i>" W., & Thornton, J., J. & A.</i> -	2027	May 13	Spinning fibres.
<i>Fereday, W. W.</i> - - - - -	112	Jan. 11	Treating excreta for manure.
<i>Fergus, J., Colket, G. H., & Brown, J. A.</i> -	1352	Mar. 29	Injectors.
[Johnson].			
<i>Ferguson, C. R.</i> (Lake) - - - - -	727	Feb. 22	Glove-fastening.
<i>Ferguson, H.</i> - - - - -	4614	Nov. 29	Anti-corrosive composition for, and stopping leaks in boilers.
<i>Ferrando-Morel, S. J. C.</i> (Bousfield)	1691	Apr. 21	Sawing timber.
<i>Ferrari, G. B. de, fu Angelo, &</i> -	3630	Sep. 16	Heating steam-boilers, furnaces, &c.
[Jarves, J. J.]			
<i>Ferris, H. W.</i> - - - - -	4634	Nov. 30	Fixing shelves, racks, &c. on walls.
<i>Ferron, C. A.</i> - - - - -	2312	June 1	Lamp-burner.
<i>Fesca, A.</i> (Duncan) - - - - -	2269	May 30	Friction-couplings.
<i>Fessey, D. W.</i> - - - - -	4004	Oct. 17	Heel-plate for boots and shoes.
<i>Fettis, J.</i> (Wise) - - - - -	4110	Oct. 24	Wire-taste or ribbon wire.
<i>Feuillat, J.</i> (Clark) - - - - -	4808	Dec. 15	Ornamenting furs and feathers.
<i>Fewings, J., & Sutcliffe, T.</i> - - -	24	Jan. 3	Bottling liquids; bottle-stoppers.
<i>Fewkes, J. I.</i> (Lake) - - - - -	987	Mar. 7	Miners' picks.
<i>Field, E., & Warren, F. P.</i> - - -	3101	Aug. 3	Protecting ships, &c. from incrustation.
<i>" J. Lyon</i> - - - - -	2142	May 20	Telescopes.
<i>" J. Lyon</i> - - - - -	2144	May 20	Drills for dental operations.
<i>" J. Lyon</i> - - - - -	2145	May 20	Engraving or cutting seals.
<i>" W.</i> - - - - -	4569	Nov. 25	Fire-arms.
<i>Field, W. H.</i> (Clark) - - - - -	4522	Nov. 21	Feed-apparatus for nail-machines.
<i>Fielden, J. J., & T.</i> - - - - -	3541	Sep. 8	Railway breaks.
<i>" T., J. & J.</i> - - - - -	3541	Sep. 8	Railway breaks.
<i>Fieldhouse, W., & Davis, E.</i> - - -	645	Feb. 16	Sinking, &c. pits and "sumps."
<i>Fielding, J.</i> - - - - -	1461	Apr. 5	Portable punching-machines.
<i>" J., Tweddell, R. H., & Platt, J.</i> -	3134	Aug. 7	Hydraulic-presses for stamping, forging, &c.
<i>" J., Tweddell, R. H., & Platt, J.</i> -	3665	Sep. 19	Hydraulic machine tools.
<i>Fields, W.</i> (Clark) - - - - -	1032	Mar. 9	Making steel.
<i>Fifield, J. F.</i> (Lake) - - - - -	1853	May 2	Condensing exhaust steam.
<i>Finch, B.</i> - - - - -	4709	Dec. 5	Valve water-closets.
<i>" W. W., & Runnett, J.</i> - - -	1188	Mar. 20	Feeder for nail-machines.
<i>Finco, E.</i> (Wallis) - - - - -	3671	Sep. 19	Composition for paving, for walls, reservoirs, [skatingrinks, mantel-pieces, &c. ("Idrofuga.")]
<i>Findlay, R.</i> - - - - -	1648	Apr. 20	Safety-valves.
<i>Firman, H. S.</i> - - - - -	2380	June 7	Rendering & drying residues for manure, &c.
<i>Firmstone, C. E.</i> - - - - -	3135	Aug. 8	Cart arms and axles; arm and axle-boxes.
<i>Firth, A. F., & Boothman, J.</i> - - -	3068	July 31	Looms.
<i>" B.</i> - - - - -	1627	Apr. 18	Washing-machines.
<i>" E.</i> - - - - -	4964	Dec. 23	Embossing textilefabrics, paper, metal, & wood.
<i>" E., & Wolstencroft, T.</i> - - -	3239	Aug. 17	Springs for wringing-machines, &c.
<i>" E., & Wolstencroft, T.</i> - - -	4754	Dec. 8	Springs & rollers for wringing & other machines.
<i>" J.</i> - - - - -	670	Feb. 17	Dyeing fabrics with indigo.
<i>" J.</i> - - - - -	2446	June 13	Brick-kilns.
<i>" J.</i> - - - - -	2447	June 13	Heating steam-boilers.
<i>" T. F.</i> - - - - -	2763	July 6	Carpets.
<i>Fish, W. S.</i> (Gallup) - - - - -	2355	June 6	Motive-power engines; pumps.

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<i>Fisher, E. (Clark)</i>	295	Jan. 25	Shearing, &c. boiler-plates.
<i>Fisher, W. E.</i>	2713	July 1	Syringes, hydrants, garden-pumps, &c.
" <i>W. R., Holt, C., & Sutcliffe, W.</i>	1574	Apr. 13	Thread-winder for sewing-machines.
<i>Fiak, J. E.</i>	3131	Aug. 5	Whitening and buffing leather.
<i>Fiaken, T. B. H.</i>	2811	July 11	Steam-cultivation.
" <i>W.</i>	11	Jan. 1	Cultivating land.
<i>Fison, W. F.</i>	2409	June 10	Exhausting gas-retorts.
<i>Fisslthaler, J.</i>	334	Jan. 27	Calendars or almanacks.
<i>Fitz-Gerald, D. G.</i>	3466	Sep. 2	Electrical condensers or accumulators.
<i>Fitzgerald, J. J.</i>	2195	May 24	Writing case and desk.
<i>Fitzhenry, E. (Haddan)</i>	4279	Nov. 6	Working hides and leather.
<i>Fitzmaurice, A.</i>	3504	Sep. 6	Pumps.
<i>Fitzpatrick, B.</i>	1745	Apr. 25	Drawing corks.
<i>Fixsen, B. (Danckwerth)</i>	1704	Apr. 22	India-rubber and gutta-percha.
<i>Flagler, H. K., & Very, T. S. (Batchelder)</i>	2839	July 12	Horse-shoe machines.
<i>Fleming, H., & Standeven, E.</i>	1190	Mar. 20	Bottles, jars, and stoppers.
" <i>J.</i>	1552	Apr. 12	India-rubber types or stamps.
<i>Fletcher, A. C. (Lake)</i>	1578	Apr. 13	Postal and other stamps.
" <i>C., & Wentworth, H. T. (Smith)</i>	2077	May 17	Doubling and twisting.
<i>Fletcher, H.</i>	3977	Oct. 14	Bible index.
" <i>James</i>	1363	Mar. 30	Forging nuts, bolts, &c.
" <i>James (Fletcher)</i>	3975	Oct. 14	Turbines for actuating sewing-machines.
<i>Fletcher, John (Fletcher)</i>	3975	Oct. 14	Turbines for actuating sewing-machines.
<i>Fletcher, John, & Young, T. P.</i>	1897	May 5	Warping and beaming.
" <i>Joseph</i>	4055	Oct. 20	Buttons.
" <i>W., & Thorn, A.</i>	1621	Apr. 18	Roller or rink skates.
<i>Fleury, F. G.</i>	779	Feb. 24	Ships' logs.
<i>Flower, Hon. R.</i>	2118	May 19	Feed for machinery; varying-motion.
<i>Floyd, J. N.</i>	4566	Nov. 25	Actuating slide-valves of engines.
<i>Flurscheim, M. (Dann)</i>	2374	June 7	Lighting, extinguishing, &c. gas.
<i>Foerste, A. (Biermanns)</i>	3051	July 29	Albums.
<i>Fogo, J.</i>	35	Jan. 4	Shawing, rooting, &c. turnips.
<i>Folacci, P. (Clark)</i>	357	Jan. 28	Rendering wood water and fire proof.
<i>Folk, J. (Lake)</i>	37	Jan. 4	Sewing-machines.
" <i>J. (Lake)</i>	3742	Sep. 25	Sewing-machinery.
" <i>J. E. (Lake)</i>	3002	July 25	Lanterns and candlesticks.
<i>Follot, F. P. (Clark)</i>	3764	Sep. 27	Flock-paper for paper-hangings, &c.
<i>Follows, F. W., & Bate, J.</i>	3187	Aug. 12	Footsteps and bearings.
<i>Fonderies et Mines de Zinc, La Société</i> [des. (Clark)]	444	Feb. 3	Pulverising ores, &c.
<i>Foot, J.</i>	2289	May 31	Combined spoon and fork.
" <i>R. G.</i>	2029	May 13	Hand or endorsing stamps.
<i>Forbes, D.</i>	4760	Dec. 8	Shunting railway rolling stock.
" <i>G.</i>	3235	Aug. 17	Writing-machines.
<i>Ford, A.</i>	1062	Mar. 11	Skating rink floors.
" <i>C.</i>	1306	Mar. 27	Preparing clay for pottery.
" <i>H.</i>	1898	May 5	Cupola or foundry furnaces.
" <i>R., & Hinks, J. & J.</i>	1603	Apr. 15	Volatile oil lamps.
" <i>W. C.</i>	834	Feb. 28	Feeding fuel to furnaces.
<i>Forges & Foundries Co. (Browne)</i>	161	Jan. 14	Making steel.
<i>Forrest, A. & C.</i>	3151	Aug. 9	Drying and powdering blood.
" <i>A. & C.</i>	5061	Dec. 30	Drying and powdering blood, &c.; evaporating solutions; dissolving and mixing.
" <i>C. & A.</i>	3151	Aug. 9	Drying and powdering blood.
" <i>C. & A.</i>	5061	Dec. 30	Drying and powdering blood, &c.; evaporating solutions; dissolving and mixing.
<i>Forster, J., & Fritsch, C. (Lake)</i>	4955	Dec. 22	Telescope.
<i>Forster, T.</i>	3921	Oct. 10	Double texture waterproof fabrics.
<i>Forsyth, R., & Gardner, A. (Johnson)</i>	4307	Nov. 7	Pulp-engines.
<i>Fos, J.</i>	2863	July 13	Cigarettes.
<i>Foss, J. F.</i>	1125	Mar. 15	Carding-machines.
<i>Foster, C. C., & Smith, J. (Clark)</i>	3735	Sep. 25	Tools for shaving, &c. leather edges.
<i>Foster, C. J. & J.</i>	2836	July 12	Brick-kilns; burning lime, &c.

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Foster, J.	2718	July 1	Water-closets, &c. ventilating sewage receptacles.
" J.	4582	Nov. 27	Web-printing machines.
" J., & Beaumont, F. E. B.	1390	Mar. 31	Rock-drills.
" J. & C. J.	2838	July 12	Brick-kilns; burning lime, &c.
" J., Smith, T., & Harrison, H.	1802	Apr. 28	Utilising scrap steel.
Foster, J. T. (Fabie)	3808	Sep. 30	Closing doors and gates.
Foster, W.	1184	Mar. 20	Checking receipt of monies.
Foster, W. F. (Clark)	3497	Sep. 5	Glove-fastenings.
Fosty, J. B., Chaumette, A., & Delpêche, [J. (Browne).	3301	Aug. 22	Memorandum tablets.
Fouillet, H. M. (Morgan-Brown)	3659	Sep. 19	Looms for pleating and diapering cloth, &c.
Foulds, J.	4462	Nov. 18	Cues and cue tips.
Foulis, W.	3655	Sep. 19	Gas governor.
" W.	4824	Dec. 13	Drawing retorts.
Foundries & Forges Co. (Browne)	161	Jan. 14	Making steel.
Fournier, J.	2720	July 1	Bicycles.
Foust, J. W., & Stratton, C. (Lake)	4800	Dec. 12	Loading waggons with hay, &c.
Fowke, G. A. F.	3851	Oct. 5	Sewer and drain pipes.
Fowler, F. G. (Clark)	1989	May 11	Steering-propellers.
Fox, C. (Hopkins)	1761	Apr. 26	Sash-fasteners.
" C. (Hopkins)	3999	Oct. 16	Alloy as substitute for brass, &c.
" Edith A.	4570	Nov. 25	Pockets; safety-attachments for watches, &c.
" H. B.	1664	Apr. 20	Stoppering bottles.
" H. B.	2253	May 29	An aerated beverage.
" S. G. L.	2693	June 30	Railways and railway rolling stock.
" S. G. L.	3138	Aug. 8	Lighting, &c. gas-lamps.
" W. H.	2038	May 15	Reaping-machines.
France, Compagnie Dentellière de. [(Simon).	4101	Oct. 23	Making lace (Malhère's system.)
France, C. B., & Ajax, J. R.	4341	Nov. 9	Corset-fasteners and stay-busks.
France, J.	4083	Oct. 23	Winding and folding yarns.
Francis, J.	1760	Apr. 26	Annealing pots and stands.
Francis, L., & Braidwood, W. (Marler)	3982	Oct. 14	Paper-folding machinery.
" L., Loutrel, C. H., & Braidwood, W. (Marler).	4351	Nov. 10	Perforating paper, &c.
Francis, W., & Baker, T. H.	4896	Dec. 19	Cleaning, dressing, &c. cotton and other seeds.
François, J. (La Société des Mines et Fonderies de Zinc) (Clark).	444	Feb. 3	Pulverising ores, &c.
Frankenburg, I.	4352	Nov. 10	Buckles and straps or belts.
Franklin, A. C. F.	50	Jan. 5	Cooling brewers' worts.
" A. C. F.	156	Jan. 14	Wheels for steam-boats; preventing, &c. rolling [of same.
" A. C. F.	466	Feb. 5	Wheel or roller skates.
" A. C. F.	1622	Apr. 8	Skate rollers or wheels.
" A. C. F.	3269	Aug. 19	Wheel or roller skates.
" A. W.	1313	Mar. 27	Dress-suspenders.
Franzini, M. M.	1986	May 11	Field-batteries; projectiles and cartridges.
" M. M.	3100	Aug. 3	Fan for ladies' use.
Fraser, J.	9	Jan. 1	Sewing-machines.
Frasi, F., & Hamilton, J.	2389	June 7	Stone-working machinery and tools.
Frérot, A. A. (Vaughan)	249	Jan. 21	Fire-alarm and gas interceptor.
" A. A. (Vaughan)	266	Jan. 22	Brake for machinery.
Free, R., & Pruvost-Volant et fils	519	Feb. 9	Kilns for drying malt, &c.
Freeman, T. K.	4487	Nov. 20	Hats or similar head-coverings.
Freeston, T. A.	3360	Aug. 26	Iron or steel converting-vessels.
Freshfield, A. (Clark)	2533	June 19	Hat-bodies.
Frew, J.	1593	Apr. 15	Supplying water to furnace tuyeres.
Frey, L.	4564	Nov. 25	Stopping looms on breakage of warp.
Fricke, E., & Blanche, C. W. J. (Doren-dorf).	2562	June 21	Engine-counters; registering, &c.
Friedeberg, Matilda	1333	Mar. 29	Lace-making.
Friedmann, A.	982	Mar. 7	Iron columns, girders, &c.

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Friend, G.	570	Feb. 12	Roller skates.
" G.	693	Feb. 18	Paper-fasteners.
Frith, S.	806	Feb. 26	Knitting-machinery.
Fritsch, C., & Forster, J. (Lake)	4955	Dec. 22	Telescope.
Fritz & Schaffer (Johnson)	4302	Nov. 7	Cigarettes.
Fritzner, N.	1534	Apr. 11	Bottle-stoppers.
Frodsham, H. M.	2912	July 15	Escapements for time-keepers.
Fröst, A. R. (Procopé)	3216	Aug. 15	Tuning apparatus for organs, &c.
Frost, J.	3365	Aug. 26	Purifying sewage, &c. treating water for boil
" J., & Walmsley, J.	2048	May 15	Colouring fabrics to imitate skins, &c. and p [ducing effects on natural skins or f
" W.	1907	May 6	Nut-washers.
" W. C., & Sloan, J. T.	924	Mar. 4	Window-fasteners.
Frudd, J. M., & Harrison, T.	1950	May 9	Hoes for farming.
Fryer, A.	550	Feb. 11	Treating street sweepings, urine, &c.
" A.	3125	Aug. 5	Treating refuse, and saline and other solutio
Fryer, R. McC. (Newton)	1519	Apr. 10	Pulverising ores and amalgamating metals
Fuller, J. B., & Crandall, J. N. (Lake)	1557	Apr. 12	Magneto-electric machines.
Fulton, D.	4729	Dec. 7	Engraving printing rollers.
" E.	3116	Aug. 5	Packing cases or crates.
" J. N.	183	Jan. 18	Sad and soldering irons.
" W.	1766	Apr. 27	Washing bottles.
Funké, H. (Gardner)	3299	Aug. 22	Knife handles.
Furey, J.	511	Feb. 9	Sights of fire-arms.
Fyfe, A. L.	2593	June 23	Ladies' dress-suspenders.
" A. L.	2681	June 29	Ladies' girdle-fasteners.
" A. L.	4447	Nov. 17	Shirt-studs and dress-fastenings.
" W. (Becker & Smith)	2411	June 10	Washing-machines.

G.

Gabriel, E., & Pickles, J.	3416	Aug. 30	Receptacles for excreta, &c.
Gadot, A. (Clark)	2212	May 25	Rifling fire-arms and ordnance.
Gaggs, O., & Wadsworth, J. E. & J.	4375	Nov. 11	Umbrella and parasol frames.
Galbraith, T.	4225	Nov. 1	Hot-air bath for treating diseases.
Galland, N. J. (Barlow)	2625	July 11	Malting.
Gallat, O. A. (Hunt)	3519	Sep. 7	Weaving looped or piled fabrics.
Gallie, J., Sinnatt, W. H.	3279	Aug. 21	Differential pulley-blocks.
Gallien, V. (Janson)	4528	Nov. 22	Blades or knives of hide-shaving machines.
Galloway, C. J.	158	Jan. 14	Steam-boilers.
" C. J., & Beckwith, J. H.	2439	June 13	Valve-gear of steam-engines, &c.
" G. B. E.	4273	Nov. 4	Constructing roadways.
" W.	2706	July 1	Miners' safety and other lamps.
Gallup, J. T. (Fish)	2355	June 6	Motive-power engines; pumps.
Galsworthy, W.	2108	May 18	Harvesting-machines.
Gamble, R.	962	Mar. 6	Portable tents.
Gamgee, J.	411	Feb. 2	Freezing liquids for ice rinks.
" J.	4176	Oct. 28	Forming, &c. ice surfaces and cooling chamb
Gammon, J., & Clark, W.	2715	July 1	Roller skates.
Gandolfo, J., & Lugo, O. (Clark)	2535	June 19	Preparing bone-black; making, &c. sugars
Gano, L. H. (Dawbarn)	3477	Sep. 4	Raising and lowering window-blinds.
Ganz, R., & Schoch, R. (Spence)	2705	July 1	Carding-engines.
Garau, S.	4763	Dec. 8	Governing or controlling railway brakes.
Gard, E. R. (Green)	817	Feb. 28	Making bricks and moulding materials.
Gardiner, D.	1655	Apr. 20	Making welded tubes.
" R.	2120	May 19	Steering gear for ships.
" W.	1213	Mar. 22	Roller skates.
Gardner, A., & Forsyth, R. (Johnson)	4307	Nov. 7	Pulp-engines.
" E. R. (Lake)	3294	Aug. 22	Sewing leather, &c. for making harness, & [boots and sho

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Gardner, E. V. - - - - -	3056	July 29	Explosive compounds.
" E. V. & J. H. - - - - -	2924	July 17	Miners' safety-lamps.
" F. - - - - -	4047	Oct. 19	Preventing sea-sickness.
" H. (Dawson) - - - - -	2414	June 10	Fire-arms and projectiles.
" H. (Putnam) - - - - -	3188	Aug. 12	Wire fastenings of bottle-stoppers.
" H. (Clark) - - - - -	3259	Aug. 19	Lamps for railway carriages, ships, &c.
" H. (Huart) - - - - -	3496	Sep. 5	Spinning-machinery.
" H. (Hay) - - - - -	3515	Sep. 6	Reducing ores; making iron and steel; welding [steel and flux for same.
" H. (Le Comte de Siccardi) -	4081	Oct. 21	Submarine-telegraphy.
" H. (Marais et Cie) - - - -	4178	Oct. 28	Toy or imitation birds.
" H. (Clark) - - - - -	4439	Nov. 16	Railway and tramway carriage couplings.
" J. H. & E. V. - - - - -	2924	July 17	Miners' safety-lamps.
Gardner, J. W. (Funké) - - - -	3299	Aug. 22	Knife handles.
Gardner, R. - - - - -	1881	May 5	Crushing or breaking rock.
Gardner, W. (Lake) - - - - -	881	Mar. 1	Machine-guns.
Garland, H. P. - - - - -	326	Jan. 26	Sacks, &c., and sewing same.
" H. P. - - - - -	3538	Sep. 8	Sewing-machinery.
Garlick, J. - - - - -	3628	Sep. 16	Kilns.
Garner, W. - - - - -	347	Jan. 28	Securing handles of brushes.
Garnett, F. J., Gee, S., & Gibbs, G. -	3011	July 26	Bottles, jars, &c., and stopping same.
" T. - - - - -	4790	Dec. 11	Threading screws.
" W. T. - - - - -	65	Jan. 6	Fish-plate for rails.
Garnier, C. (Lake) - - - - -	4577	Nov. 25	Stiffening, waterproofing, &c. threads & fabrics.
" J. (Lake) - - - - -	1194	Mar. 20	Nickel and its alloys.
Garrad, W. - - - - -	521	Feb. 9	Handles for coffins, doors, &c.; manger-rings, [door knockers, &c.
Garrett, J. D. - - - - -	2278	May 30	Straw-elevators.
" J. D. - - - - -	2279	May 30	Fitting axles of portable-engines, &c.
" J. D. - - - - -	2304	May 31	Thrashing-machine drums.
" J. D. - - - - -	4311	Nov. 7	Welding and shaping railway wheels, &c.
" N. D., & Pope, W. A. - - - -	205	Jan. 19	Signalling in trains.
Garrison, W. F. (Newton) - - - -	4523	Nov. 21	Air-pumps.
Garrood, J. C. - - - - -	3875	Oct. 6	Bicycles and other velocipedes.
Garroway, J. & W. - - - - -	3759	Sep. 27	Refining mineral and other oils.
" W. & J. - - - - -	3759	Sep. 27	Refining mineral and other oils.
Garside, C. - - - - -	1205	Mar. 21	Rotatory engines; exhausting, &c. fluids.
" W., & Waddington, J. - - - -	1005	Mar. 8	Admitting, &c. air to furnaces.
Garton, W. - - - - -	1311	Mar. 27	Brewing and a material for same.
" W. - - - - -	1323	Mar. 28	Brewing and materials for same.
Gaskill, P. - - - - -	41	Jan. 4	Washing bottles.
Gastrell, J. P. Harriss - - - - -	1440	Apr. 4	Roller skates.
" J. P. Harriss - - - - -	4161	Oct. 26	Resisting impact in ships, &c.; obtaining flexibility in rink floors.
Gauchet, A. (Wise) - - - - -	1699	Apr. 21	Hydro-gas injector.
Gaudchaux-Picard, E. - - - - -	4318	Nov. 8	Unweaving fabrics and utilising filaments.
Gauntlett, C. W. - - - - -	4657	Dec. 1	Steam-generators.
Gavin, A., & Gavin, D. - - - - -	1876	May 4	Railway brakes.
Gavin, D., & Gavin, A. - - - - -	1876	May 4	Railway brakes.
Gavioli & Co. (Brewer) - - - - -	3013	July 26	Organ pipes or tubes.
Geary, F. - - - - -	672	Feb. 18	Skating rink floors.
" H. - - - - -	76	Jan. 7	Effecting combustion of fuels.
" H., & Rosway, C. - - - - -	4426	Nov. 15	Treating impure lead and products of same.
Gebbie, J. - - - - -	4885	Dec. 18	Dressing and cleaning grain.
Gedge, W. E. (Le Bret) - - - - -	62	Jan. 6	Signalling on trains.
" W. E. (Cornely) - - - - -	212	Jan. 19	Sewing and embroidering.
" W. E. (Owen) - - - - -	662	Feb. 17	Breech-loading cannon.
" W. E. (Picard) - - - - -	849	Feb. 29	Lock.
" W. E. (Lahaire) - - - - -	1447	Apr. 5	Steam-boiler fire-places.
" W. E. (Reardon) - - - - -	1578	Apr. 13	Writing machine or "Diplograph."
" W. E. (Schmidt) - - - - -	1683	Apr. 21	Safety-envelope.
" W. E. (Chamolle) - - - - -	1711	Apr. 22	Hydraulic-generator or spiral-pump.
" W. E. (Allard) - - - - -	3172	Aug. 11	Waggons or trucks for coal, &c.

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Gedge, W. E. (<i>Hanhart</i>) - - - -	3205	Aug. 14	Self-acting mules.
" W. E. (<i>Vincent</i>) - - - -	3750	Sep. 26	Seats for vehicles.
" W. E. (<i>Bontigny</i>) - - - -	4059	Oct. 20	Boots and shoes.
" W. E. (<i>Terpereau</i>) - - - -	4060	Oct. 20	Portable photographic apparatus.
" W. E. (<i>Scolley</i>) - - - -	4068	Oct. 21	Preserving food, &c.
" W. E. (<i>Zanichelli</i>) - - - -	4177	Oct. 28	Portable articulated railway.
" W. E. (<i>Smith</i>) - - - -	4200	Oct. 30	Material for paving, building, sleepers, &c.
" W. E. (<i>Rödiger</i>) - - - -	4594	Nov. 28	Railway wheels.
" W. E. (<i>Rivière</i>) - - - -	4786	Dec. 11	Washing coal-ores, &c.
" W. E. (<i>Gimello</i>) - - - -	4902	Dec. 19	Raising sunken wooden ships.
" W. E. (<i>Fayolle de Mans</i>) - -	4930	Dec. 21	Forging bolts.
" W. E. (<i>Spanoghe</i>) - - - -	5015	Dec. 28	Smoke-burning furnaces; producing steam.
" W. E. (<i>Hiernaux</i>) - - - -	5055	Dec. 30	Coal-tar hydro-carburets and amines of same.
Gee, J. - - - -	4838	Dec. 14	Constructing toothed gearing.
" S., Gibbs, G., & Garnett, F. J.	3011	July 26	Bottles, jars, &c., and stopping same.
Gee, S. E. (<i>Churchill</i>) - - - -	218	Jan. 19	Washer for bolts and nuts.
Gégnon, P. E. (<i>Clark</i>) - - - -	1354	Mar. 29	Machine-bands, cables, &c.
Geiger & Meyer (<i>Maschwitz</i>) - -	4169	Oct. 27	Opening preserved food, metal cases, &c.
Geistodt, L. A., & Plicque, J. F. (<i>Clark</i>)	4433	Nov. 16	Decolorizing, &c. saccharine juices.
Geneste, E. F., & Herscher, C. G. & E.	3857	Oct. 5	Portable ovens.
[(Johnson).]			
Gent, G. - - - -	3890	Oct. 7	Artists' easels.
" J. S. - - - -	4283	Nov. 6	Gas-burners.
" P. - - - -	4459	Nov. 18	Gas-stoves.
Geoghegan, W. J. - - - -	1019	Mar. 9	Rink skates.
Gerard, P. C. (<i>Brewer</i>) - - - -	758	Feb. 23	Cutting fabrics, &c.
Gerhard, F. W. - - - -	2450	June 14	Making iron and steel.
Gerlach, G. T. (<i>Wirth</i>) - - - -	3756	Sep. 26	Treating spent materials of gas-works.
Gerland, B. W. (<i>Albert & Albert</i>) - -	4667	Dec. 2	Pulverising minerals and other substances.
Gervais, A., <i>Murcier, L., & Perret, P. A.</i>	2058	May 16	Camp kettles.
[(Clark).]			
Gervais, E. F. J. A. - - - -	1820	May 1	Corking bottles.
Gibbons, R. A. - - - -	1365	Mar. 30	Making casks.
" R. A. - - - -	4480	Nov. 20	Portland cement.
Gibbs, G., Garnett, F. J., & Gee, S.	3011	July 26	Bottles, jars, &c., and stopping same.
" J. A. - - - -	3156	Aug. 9	Economising fuel and diminishing smoke.
Gibbs, J. E. A. (<i>Johnson</i>) - - - -	139	Jan. 13	Sewing-machines.
Gibbs, W. A. - - - -	1380	Mar. 30	Drying-apparatus.
Gibson, H. - - - -	4354	Nov. 10	Weighing and tilting coal.
" J. W., & Pemberton, F. - -	1595	Apr. 15	Manufacturing tobacco.
Gidney, J. W. - - - -	3493	Sep. 5	Carburetting air or gas.
Giessner, L. - - - -	4368	Nov. 11	Preparing shoes before sewing.
Giggle, J., & Chadwick, H. J. - -	1860	May 3	Lubricating engine cylinders.
Gilardi, G. - - - -	715	Feb. 19	Combustible composition.
Gilbert, L. De H., Bigler, C. S., & McPherson, J. B. (<i>Lake</i>).	883	Mar. 1	Brick-making.
" S. P., Chapin, H. A. (<i>Lake</i>) - -	2672	June 28	Lamps and lamp-burners.
Gilbert, W. H. - - - -	1796	Apr. 28	Distilling alcohol, &c.
Gill, C. H. (<i>Gill</i>) - - - -	901	Mar. 2	Making beer.
" C. H. (<i>Boegel</i>) - - - -	2778	July 7	Sugar-making.
" D. - - - -	3864	Oct. 6	"Twin-door" for sanitary purposes.
Gill, F. N. G. (<i>Gill</i>) - - - -	901	Mar. 2	Making beer.
Gill, J. - - - -	4917	Dec. 20	Gas-stove.
Gill, J. P. (<i>Lake</i>) - - - -	262	Jan. 22	Making gas and applying same.
Gillett, J. - - - -	759	Feb. 23	Steam-pumps.
Gillibrand, R. T., & Timperley, R. -	4436	Nov. 16	Printing-machinery.
Gillies, J. - - - -	78	Jan. 7	Charging, &c. bottles with aerated liquids.
Gillings, J. - - - -	2493	June 15	Key for railway chairs.
Gillman, A. W., & Spencer, S. - -	1335	Mar. 29	Bottling liquids.
" J. - - - -	3530	Sep. 8	Grave-tablet.
Gillott, J. - - - -	4384	Nov. 11	Motive-power engines; boiler-fittings.
" J., & Arnold, W. - - - -	2004	May 12	Motive-power engines; boiler-fittings.
Gilmour, J. - - - -	1601	Apr. 15	Engaging trucks or waggons.

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<i>Gilzinger, S. (Lake)</i> - - - - -	3265	Aug. 19	Velocipedes.
<i>Gimello, C. (Gedge)</i> - - - - -	4902	Dec. 19	Raising sunken wooden ships.
<i>Girard, C., Willm, E., & Bouchardat, G.</i>	4839	Dec. 14	Obtaining colouring matters.
<i>Girdlestone, J. W.</i> - - - - -	1867	May 3	Dry-closets, commodes, &c.
<i>Gisborne, J. S.</i> - - - - -	1090	Mar. 13	Transmitting, &c. signals and orders.
" <i>T. M.</i> - - - - -	1495	Apr. 8	Raising and lowering boats.
<i>Gittins, E.</i> - - - - -	4096	Oct. 23	Kilns for burning bricks, &c.
<i>Glaçon, A. A. T. (Morgan-Brown)</i> -	2631	June 26	Wire-drawing apparatus.
<i>Gladwyn, W.</i> - - - - -	1922	May 8	Ironing linen, &c.
<i>Glaister, T.</i> - - - - -	2618	June 24	Roller skates.
<i>Glazebrook, L., & Nelson, W.</i> - - -	2042	May 15	Rink and parlour skates.
<i>Gledhill, F. R., & Rees, E.</i> - - -	778	Feb. 24	Steam-boilers and furnaces.
" <i>G.</i> - - - - -	1917	May 6	Electrical stop-motions.
" <i>J.</i> - - - - -	4994	Dec. 23	Footsteps of spindles used in spinning, &c.
<i>Gleisle, O. (Wirth)</i> - - - - -	3046	July 28	Table-fountains; raising water.
<i>Glendenning, W., Rayner, G., & Har-</i>	127	Jan. 12	Washing clothes, &c.
" <i>W., Rayner, G., & Har-</i>	3192	Aug. 12	Washing clothes; churning butter.
" <i>rison, J.</i>			
<i>Glendining, H.</i> - - - - -	3275	Aug. 21	Locks and latches.
<i>Glenn, H.</i> - - - - -	2336	June 3	Fastening boots and shoes.
<i>Glisenti, F. (Morgan-Brown)</i> - - -	1671	Apr. 21	Fire-arms.
<i>Glover, E., & Thackeray, J. L.</i> - - -	742	Feb. 22	Doubling silk, cotton, &c.
" <i>E., & Thackeray, J. L.</i> - - -	2402	June 9	Doubling cotton, &c.
" <i>F.</i> - - - - -	1732	Apr. 24	Fulling woven fabrics.
" <i>F. R. A.</i> - - - - -	4861	Dec. 15	Lowering ships' boats.
<i>Gloyn, J. F. (Morgan)</i> - - - - -	3364	Aug. 26	Floor covering.
<i>Goddard, E.</i> - - - - -	882	Mar. 1	Wheels for bicycles and vehicles.
<i>Godefroy, L.</i> - - - - -	1036	Mar. 10	Printing or ornamenting fabrics.
<i>Godfrey, C. (Lake)</i> - - - - -	761	Feb. 23	Lighting houses, ships, &c.
<i>Godfrey, S., & Howson, R.</i> - - -	3692	Sep. 21	Gas furnaces and utilizing same.
<i>Goedicke, F. W. E. R.</i> - - - - -	2526	June 19	Disposing of sewage.
<i>Goldsmith, G., & Robinson, C. S.</i> -	3527	Sep. 8	Securing railway rails to chairs.
<i>Goliash, G. (von Nawrocki)</i> - - -	4680	Dec. 1	Pocket lantern.
<i>Good, J.</i> - - - - -	3047	July 28	Transmitting motion to driving-bands, &c.
<i>Good, J. (Newton)</i> - - - - -	2276	May 30	Spreading, drawing, &c. fibres.
" <i>J. (Newton)</i> - - - - -	2369	June 6	Hedding fibres.
<i>Good, J., & Lawson, T.</i> - - - - -	2841	July 12	Preparing fibres.
<i>Goodair, R., & Whiteside, J.</i> - - -	718	Feb. 21	Looms.
<i>Goodchild, W. H., & Hay, S. F.</i> - -	2123	May 19	Cutting meat, &c.; paring apples.
<i>Goeder, J. W.</i> - - - - -	3983	Oct. 16	Spinning, twisting, and doubling fibres.
<i>Goodfellow, G. B., & Hallam, S.</i> - -	4983	Dec. 23	Steam-pumps; actuating steam-engine valves.
<i>Goodrick, J.</i> - - - - -	1871	May 4	Web halter heads.
<i>Goodwin, A.</i> - - - - -	4787	Dec. 11	Drawing and forcing liquids.
<i>Goodwin, C. R. (Christy)</i> - - - - -	527	Feb. 9	Roller skates.
<i>Goodwin, G. J.</i> - - - - -	922	Mar. 4	Neckties and fasteners.
<i>Goodwyn, S. T. (Haddan)</i> - - - -	2159	May 22	Steam culinary vessels.
<i>Goodyear, C. (Goodyear)</i> - - - - -	1564	Apr. 13	Boot and shoe sewing-machines.
<i>Goodyear, H. B.</i> - - - - -	867	Mar. 1	Boots and shoes.
" <i>H. B. (Goodyear)</i> - - - - -	1564	Apr. 13	Boot and shoe sewing-machines.
<i>Gordon, J. (Haddan)</i> - - - - -	2703	July 1	Signals and signalling.
<i>Goslin, S. B., Wilks, G., & Pullar, J.</i>	393	Feb. 1	Divers' dresses.
<i>Gössell, O. (Haug)</i> - - - - -	1207	Mar. 21	Reducing furnaces.
<i>Gould, J. C. (Lake)</i> - - - - -	4396	Nov. 13	Feed-apparatus for nail-machines.
<i>Goulding, J.</i> - - - - -	3258	Aug. 19	Spinning.
<i>Goulson, J. (Johnson)</i> - - - - -	2299	May 31	Gas-meters.
<i>Goundry, R.</i> - - - - -	3778	Sep. 28	Treating coffee for market.
<i>Gowans, J.</i> - - - - -	1087	Mar. 13	Numbering, stamping and embossing.
<i>Gower, F. A. (Clark)</i> - - - - -	407	Feb. 1	Row-lock.
<i>Graf, L. (Clark)</i> - - - - -	2318	June 1	Trimming, &c. boot heels and soles.
<i>Graham, A. & J. W.</i> - - - - -	3061	July 31	Sawing or cutting stone.
" <i>A. McD.</i> - - - - -	4791	Dec. 11	Obtaining fatty matters from sewage, &c.
" <i>J. W. & A.</i> - - - - -	3061	July 31	Sawing or cutting stone.

Name.	Number of Application.	Date of Application.	Subject.
Graham, S. - - - - -	3502	Sep. 6	Treating yarns.
Graham, W. A. (Newton) - - - -	975	Mar. 6	Brick-making.
Grand, A., le - - - - -	2174	May 23	Turnstiles.
Granjon, J. P., & Musy, L. (Imray) -	2726	July 3	Support for railway travellers.
Grant, G. - - - - -	2095	May 18	Umbrellas and walking-sticks.
" L., & Douglas, R. - - - -	2860	July 13	Motive-power engines.
" W. - - - - -	1878	May 11	Dressing or polishing stone.
Grantham, J., Waddle, M., & Sample, J.	936	Mar. 4	Railway chair key.
Grason, J. - - - - -	4007	Oct. 17	Self-locking shirt-stud.
Grasser, C. (Lake) - - - - -	2500	June 16	Producing moulds in wax, &c.
Graves, T., & Meadowcroft, T. - -	1731	Apr. 24	Safety-apparatus for window-cleaning, &c.
Gravier, Dandrieux et Cie (Mewburn)	3036	July 28	Flying or aerial toy.
Gravot, P. A., & Juvenal, J. M. (Brewer)	61	Jan. 6	Floating and submerged ships, and propelling [same.]
Gray, D. - - - - -	4817	Dec. 13	Separating air, steam or other fluid.
Gray, E. (Bousfield) - - - - -	1874	May 4	Telegraphing and analysing musical sounds.
Gray, J. W. - - - - -	422	Feb. 2	Skates.
" J. W. (Martel) - - - - -	3123	Aug. 5	Reversible table-cloth.
" T. H. - - - - -	2370	June 6	Cleansing, &c. grain and flour.
" T. H. - - - - -	2694	June 30	Making starch.
Grayson, J., & Clarke, S. - - - -	1765	Apr. 26	Gas-making.
" J. W. (Addyman) - - - - -	2484	June 15	Friction-clutches and pulleys.
" J. W., & Hardisty, W. H. - - -	344	Jan. 28	Journals for reels, swifts, &c.
Greathead, J. H. - - - - -	424	Feb. 2	Locking nuts on screw-bolts.
Greathore, J. E., & Hall, T. P. - -	4137	Oct. 25	Artificial stone for paving, &c.
Greaves, T., & Baxter, W. - - - -	958	Mar. 6	Studs or solitaires.
" T. W. - - - - -	958	Mar. 6	Ornamenting jewellery.
" T. W., Coggins, J., & Baxter, G.	927	Mar. 4	Crochet-hooks, &c. and handles.
Green, C. E. & R. - - - - -	1794	Apr. 28	Fire-arms.
" C. H. (Gard) - - - - -	817	Feb. 28	Making bricks and moulding materials.
Green, C. H. (Chapman) - - - - -	850	Feb. 29	Roller skates.
Green, C. H. (Pond) - - - - -	2301	May 31	Wood paving.
" C. H. (Coze) - - - - -	2876	July 14	Oil-stoves.
" G. - - - - -	3120	Aug. 5	Bridles.
" G., & Mallol, J. - - - - -	4037	Oct. 19	Mounting electro-plate wares.
" G., & Mallol, J. - - - - -	4038	Oct. 19	Revolving-dishes, butter-coolers, &c.
" H. - - - - -	3880	Oct. 7	Coal-gas scrubbers; distributing liquids, &c.
" H., & Sykes, B. - - - - -	1379	Mar. 30	Roller skates.
" H., & Sykes, B. - - - - -	1829	May 1	Roller skates.
" J. - - - - -	2775	July 7	Mowing and reaping machines.
" R. & C. E. - - - - -	1794	Apr. 28	Fire-arms.
Green, S. W. (Hunt) - - - - -	1255	Mar. 24	Setting and distributing type.
Green, T. - - - - -	3474	Sep. 2	Sweeping and mowing machines.
" T., Turton, W., & Walker, J.	4738	Dec. 7	Stopping and starting gear for tram-cars, &c.
" T. G. - - - - -	302	Jan. 25	Potters' bats.
" T. G. - - - - -	916	Mar. 3	Straining and sifting.
" W. H. - - - - -	1892	May 5	Hats and caps.
Greenhill, J. H. - - - - -	3065	July 31	Grain sieves.
" W. - - - - -	4519	Nov. 21	Connecting service pipes with drains.
Greenhough, F. - - - - -	3819	Oct. 2	Lighting fires.
Greenstreet, T. G. - - - - -	4676	Dec. 4	Traps for gullies, drains, &c.
Greenwood, Abraham, Davis, G. E., & Speakman, J. J.	3673	Sep. 19	Collecting and treating excreta, &c. for products.
" Arthur, & Fenby, H. P. - - -	648	Feb. 16	Cut-nail machinery.
" Arthur, & Keats, J. - - - -	3455	Sep. 1	Boots and shoes and sewing same.
" Arthur, & Kritch, W. C. - - -	4549	Nov. 23	Printing-machinery.
" Arthur, & Baviile, E. P. - - -	4610	Nov. 28	Screw-cutting machinery and tools.
" James - - - - -	2803	July 10	Sash-fastenings.
" James, Redfern, R., & [Ashworth, J.] - - - -	4895	Dec. 19	Constructing loom "swells."
" John, & Taylor, H. - - - -	3794	Sep. 29	Preparing fibres.
" W. H. - - - - -	4591	Nov. 27	Railway and tram-car brakes.
Greenwood, W. M., & Clarke, J. N. (Lake)	667	Feb. 17	Making horse-shoes.

Name.	Number of Application.	Date of Application.	Subject.
Gregory, G. W., & Paget, F. A.	3635	Sep. 16	Producing "clocking" on hosiery.
Greig, D.	2471	June 14	Traction-engines for military purposes.
" D.	2791	July 8	Locomotive and tramway engines.
" D., & Eyth, M.	2633	June 26	Steam-engine air-condensers.
" D., & Benstead, T.	2789	July 8	Reaping-machines.
" D., & Achilles, G.	3333	Aug. 24	Traction-engines and other locomotives.
" D., Eyth, M., & Waite, P.	902	Mar. 2	Moving land.
" G.	3831	Oct. 3	Steam-cultivators.
Grétière, — (Dufrené)	4175	Oct. 28	Attaching samples to cards.
Grier, W. F.	3107	Aug. 4	Preservative for animal substances, &c.
Grierson, H. H.	4883	Dec. 18	Furnaces.
" J. S., & Philips, R.	4449	Nov. 17	Printing-machines.
Griffin, E. F.	3966	Oct. 13	Solitaires, sleeve-links, studs, buttons, &c.
" G. F.	3302	Aug. 23	Boxes for matches, &c.
" J., Prudencio, F., & Batten, C. W.	4510	Nov. 21	Bottles for aerated liquids and stoppering same.
" N. D.	1338	Mar. 29	Shovels.
" P.	3276	Aug. 21	Making whisky and other spirits.
" S.	4548	Nov. 23	Folding chair-bedsteads.
" Thomas	1937	May 9	Stereotype plates.
" Townshend	149	Jan. 14	Sealing, &c. preserved provision cases.
" W.	1165	Mar. 18	Collecting, &c. money or tickets.
Griffiths, L.	671	Feb. 17	Annealing pots.
" L.	859	Feb. 29	Cleaning, &c. metal plates.
" R.	3549	Sep. 9	Discharging water from ships.
" R. & W. J.	2023	May 13	Armour-clad and other vessels and propelling [same; stowing, &c. ships' boats.
" W. J. & R.	2023	May 13	Armour-clad and other vessels and propelling [same; stowing, &c. ships' boats.
Grigg, W. L.	1912	May 6	Brick-machines.
Grimes, R.	2161	May 22	"Latch" or "tumbler" needles.
Grimmett, C. F.	3667	Sep. 19	Making skelps and tubes.
Grimston, T. A.	2110	May 18	Steam-engines.
Grin, C.	4623	Nov. 29	Life-preserving dress and appliances.
Groat, B. P., & Draper, H. V. P. (Lake)	108	Jan. 10	Lubricating compounds.
Grosbeck, D., & St. John, W. H. (Lake)	589	Feb. 12	Ventilating railway carriages, houses, &c.
Grocock, S. P. (Clark)	2473	June 14	Parquet flooring.
Grosclaude, L. A., & Sargent, W. B.	2969	July 21	Copying-press.
Grosvenor, W. S., & Sangster, J. (Lake)	299	Jan. 25	Electro-magnetic regulators.
" W. S., & Sangster, J. (Lake)	2423	June 12	Marine-engine governors.
Ground, H. N.	3998	Oct. 16	Ascertaining levels between points.
Groundwater, R., & Pirio, A. C.	4846	Dec. 14	Laying out envelopes, &c. for bordering.
Grout, J.	4122	Oct. 24	Infants' food warmers.
Groves, J.	437	Feb. 3	Sawing-machinery.
Grubinski, F. von	195	Jan. 18	Reaping and mowing machine.
Grün, A., & Meunier, E. (Johnson)	2322	June 2	Combing fibres.
Grünbaum, H. A. O. E.	3923	Oct. 11	Preventing gunpowder exploding in storage, &c.
Grüneberg, C. (Schönrock)	3994	Oct. 16	Composition for extinguishing fire.
Grüneberg, H. (Johnson)	3551	Sep. 9	Treating iron residues in purifying gas.
Gruyer, A.	3471	Sep. 2	Frames of umbrellas and parasols.
" J.	3140	Aug. 8	Umbrellas and parasols.
Guanzioli, J. L.	2452	June 14	Hydrometers, salinometers, &c.
Gubbins, R. R.	1585	Apr. 13	Rotary fans; driving machinery.
Gulcher, R. I. (Lake)	4154	Oct. 26	Looms.
Guépin, E., & Cathelineau, R. (Alex- [ander].)	2640	June 27	Lasting boots; stretching leather and skins.
Guérin, E. G.	2650	June 27	Dipping cup for inkstands, &c.
" E. G.	4971	Dec. 23	Inkstands or ink-bottles, &c.
Gwrrant, J. C. (De Pass)	1344	Mar. 29	Electro-engraving machines.
" J. C., & Leventhorpe, C. [(Jensen).]	842	Feb. 29	Liquid and fluid meters.
Guggenbühler, G. F. Coccapieller de	787	Feb. 24	Brakes for trains or vehicles.
" G. F. Coccapieller de	789	Feb. 24	Stopping vehicles and detaching horses there- [from.]

Name.	Number of Application.	Date of Application.	Subject.
<i>Guillemare, A., Pallas, L., & Labarthe, [B. (Newton).</i>	4369	Nov. 11	Lamps.
<i>Guinotte, L., & DeHennault, Bros. (Lake)</i>	4221	Nov. 1	Pressure-indicator.
<i>Guiraud, L. (Henderson) - - - -</i>	3529	Sep. 8	Cleaning river-beds and water-courses.
<i>Guitard, E. E. (Johnson) - - - -</i>	25	Jan. 3	Warming railway-carriages and tram-cars.
<i>Guterman, S. (Rosenfeld, Bros. & Co.)</i>	4686	Dec. 4	Holders or bases for inkstands, &c.
<i>Gummi Kamm Co., Hannover (Wirth)</i>	973	Mar. 6	Bobbins.
<i>Gunzburger-Lévy, L. - - - -</i>	315	Jan. 26	Motive-power engine.
<i>Guthrie, A. - - - -</i>	935	Mar. 4	Steam and other engines.
" C. T. - - - -	825	Feb. 28	Cleaning knives.
<i>Guthrie, F. A. (Haddan) - - - -</i>	1980	May 11	Frames for tents and berths.
<i>Guthrie, H. - - - -</i>	28	Jan. 3	Pressing or solidifying granular substances.
" H. - - - -	3624	Sep. 16	Pressing or solidifying granular substances.
<i>Guy, C. A. (Brewer) - - - -</i>	3217	Aug. 15	Printing-machines.
<i>Guy, D. - - - -</i>	4190	Oct. 30	Chimney-pot.
<i>Gwynne, J. - - - -</i>	737	Feb. 22	Centrifugal pumps.
" J. - - - -	2688	June 29	Excavators.
" J. E. A., & Collinson, H. -	1277	Mar. 25	Constructing retort-lids, manhole-covers, &c.

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<i>Haarmaan, L. - - - -</i>	3717	Sep. 22	Regenerative Siemens' furnace.
<i>Hacking, W. H., & Wilson, T. E. -</i>	3499	Sep. 6	Winding yarn.
<i>Hackworth, A. & J. W. - - - -</i>	4246	Nov. 2	Valve-gear for steam-engines.
" J. W. & A. - - - -	4246	Nov. 2	Valve-gear for steam-engines.
<i>Haddan, H. J. (Drew) - - - -</i>	49	Jan. 5	Lubricating oil cups.
" H. J. (Wheeler) - - - -	483	Feb. 7	Solar-chronometers.
" H. J. (Pattysen) - - - -	567	Feb. 12	Distributing type.
" H. J. (Osborn) - - - -	865	Mar. 1	Paper-boxes.
" H. J. (Littlefield) - - - -	1022	Mar. 9	Washing fabrics.
" H. J. (Littlefield) - - - -	1023	Mar. 9	Wringers.
" H. J. (Brewster) - - - -	1126	Mar. 16	Skate attachments.
" H. J. (Couvrette) - - - -	1257	Mar. 24	Ships' rudders.
" H. J. (Whiting) - - - -	1400	Mar. 31	Dressing tampico and bristles.
" H. J. (Whitney & Couant) -	1401	Mar. 31	Grain-binders.
" H. J. (Wills) - - - -	1489	Apr. 7	Making horse-shoe nails; working, &c. iron.
" H. J. (Lechner, Sessions, & [Jeffrey.	1707	Apr. 22	Mining-machines.
" H. J. (Lüders) - - - -	1778	Apr. 27	Lighting conveyances.
" H. J. (David) - - - -	1979	May 11	Gaff-fastenings for vessels.
" H. J. (Guthrie) - - - -	1980	May 11	Frames for tents and berths.
" H. J. (Bollenbacher) - - -	1981	May 11	Kitchen safes.
" H. J. (Lawrence) - - - -	1982	May 11	Castors.
" H. J. (Farnham) - - - -	1983	May 11	Fastenings for gloves, &c.
" H. J. (David) - - - -	1995	May 12	Capstans.
" H. J. (Goodwyn) - - - -	2159	May 22	Steam culinary vessels.
" H. J. (Cooke) - - - -	2160	May 22	Hand printing stamps.
" H. J. (Barton) - - - -	2255	May 29	Steam-boilers.
" H. J. (Simpson) - - - -	2625	June 26	Dampening pads for copying books.
" H. J. (Gordon) - - - -	2703	July 1	Signals and signalling.
" H. J. (Voigt) - - - -	2926	July 18	Chronometer escapements.
" H. J. (Du Bled & Dujardin)	2964	July 21	Waterproofing substances.
" H. J. (Mittner & Lüders) -	3175	Aug. 11	Looms.
" H. J. (Brown) - - - -	3176	Aug. 11	Valves and gearing for same.
" H. J. (Whiting) - - - -	3177	Aug. 11	Dressing tampico and bristles.
" H. J. (Hughes) - - - -	3347	Aug. 25	Railways.
" H. J. (Mallory) - - - -	3348	Aug. 25	Disintegrating quartz, &c.
" H. J. (Blaisdell) - - - -	3350	Aug. 26	Railroad-ties.
" H. J. (Peckham) - - - -	4094	Oct. 23	Coal and ash sieves.
" H. J. (Brauer) - - - -	4141	Oct. 25	Rotary-engines.

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APPLICANTS FOR PATENTS FOR THE YEAR 1876.

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Name,	Number of Application.	Date of Application.	Subject.
Haddan, H. J. (<i>Covert</i>) - - - -	4278	Nov. 6	Feeding presses with paper, &c.
" H. J. (<i>Fitzhenry</i>) - - - -	4279	Nov. 6	Working hides and leather.
" H. J. (<i>Weston</i>) - - - -	4280	Nov. 6	Magneto-electric machines.
" H. J. (<i>Carpenter</i>) - - - -	4281	Nov. 6	Lubricators for wheels of vehicles.
" H. J. (<i>Barnard & Leas Manu- [facturing Co.]</i>) - - - -	4282	Nov. 6	Grain separators and scourers.
" H. J. (<i>Ames</i>) - - - -	4334	Nov. 9	Car-couplings.
" J. L. (<i>Sheldon</i>) - - - -	3503	Sep. 6	Mining coal.
" J. L. (<i>Woods</i>) - - - -	3907	Oct. 10	Stone-dressing machines.
" J. L. (<i>Craven</i>) - - - -	3927	Oct. 11	Refrigerators or preserving chambers.
" J. L. (<i>Liasse</i>) - - - -	4093	Oct. 23	Despatch-tubes.
" J. L. (<i>Ayres</i>) - - - -	4140	Oct. 25	Raising water by compressed air.
Haden, P., Beyfus, L., Picking, G. G., [& Hopkins, W.] - - - -	361	Jan. 29	Raising sunken vessels.
Hadenfeld, E., & Iffland, D. (Abel) -	4165	Oct. 27	Indicating leeway and speed of vessels.
" E., & Iffland, D. (Abel) -	4166	Oct. 27	Automatic feed for steam-boilers.
Hadfield, R. - - - -	886	Mar. 2	Safes.
" R. - - - -	890	Mar. 2	Lubricators for corves, &c.
" R. - - - -	4562	Nov. 24	Self-lubricating wheel for corves, trucks, &c.
Haeghen Limelette, R. J. P. van der [Newton] - - - -	1068	Mar. 11	Vitreous colours.
Haffner, J. P. - - - -	3733	Sep. 25	Safety-lock for coffers, &c.
Hagelin, G. - - - -	4873	Dec. 16	Steam-engine for small power.
Hagenbüchli, C. (Wise) - - - -	641	Feb. 16	Concertinas and accordions.
Haggenmacher, C. (Murdoch) - - -	53	Jan. 5	Winnowing, sorting, &c. corn and seeds.
Haggett, W. - - - -	612	Feb. 15	Artificial fuel.
Hagues, E., Wright, J., & Wray, T. -	2078	May 17	Floors, ceilings, pillars, &c.
Hahn, J. (Clark) - - - -	1031	Mar. 9	Hydraulic-elevators.
Haigh, B., Chadderton, J., & All- [mark, J.] - - - -	169	Jan. 15	Steam-engine valves.
" J., & Lumb, J. - - - -	1443	Apr. 4	Lubricating engine cylinders, &c.
" W. B. - - - -	2788	July 8	Bench sawing machinery.
" W. B. - - - -	3255	Aug. 19	Mitre-cutting machines for wood.
" W. B. - - - -	4506	Nov. 21	Bench sawing machinery.
Haisne, G. d' - - - -	3281	Aug. 21	Beds for the wounded and sick.
Hakes, T., & Walker, M. - - - -	699	Feb. 19	Roller or wheel skates.
Halbert, W. - - - -	3153	Aug. 9	Winding thread or yarn.
Hall, A. A., & Bricknell, A. L. (Jensen)	4331	Nov. 9	Cast-metal pulleys and making same.
Hall, C. E. - - - -	1613	Apr. 18	Breaking and disintegrating stones, &c.
" H. - - - -	3775	Sep. 28	Baskets or coverings for carboys, &c.
" John - - - -	1420	Apr. 3	Draught and dust excluder.
" John & W. - - - -	1409	Apr. 1	Roller skates.
" John S. - - - -	1993	May 12	Sewing-machines for sacks, &c.
" Julius - - - -	2287	May 31	Fire-extinguishers.
" R. - - - -	1387	Mar. 31	Steam cultivation.
" R., & Priestley, S. - - - -	3202	Aug. 14	Making spiral metallic bands.
" T. P., & Grcatorex, J. E. - - -	4137	Oct. 25	Artificial stone for paving, &c.
" W. - - - -	581	Feb. 12	Twisting and doubling silk.
" W. & J. - - - -	1409	Apr. 1	Roller skates.
" W. S. - - - -	3407	Aug. 29	Switch-box for railways.
Hallam, S., & Goodfellow, G. B. -	4983	Dec. 23	Steam-pumps; actuating steam-engine valves.
Hallatt, B., & Mason, E. - - - -	4776	Dec. 11	Twist lace machines.
Hallewell, R. - - - -	4987	Dec. 23	Gas-motor engines.
" R. - - - -	4988	Dec. 23	Gas and water motor engines and gas-motors.
Hallpike, H. J. - - - -	3978	Oct. 14	Sleeve-links, collar-studs, &c.
Hallsworth, S., & Bailes, R. - - -	869	Mar. 1	Purifying gas.
Halluin, D. H. L. d' (Browne) - -	2515	June 17	Extracting oil and obtaining varnish.
Halsey, C., & Wigzell, E. E. - - -	177	Jan. 17	Engines for steam-launches, &c.
" C., & Wigzell, E. E. - - -	3678	Sep. 20	Engines for steam-launches and yachts.
Hambling, R., & Bowles, G. - - -	814	Feb. 26	Roller skates.
Hamel, F. J. - - - -	6	Jan. 1	Artificial fuel.
" F. J. - - - -	1846	May 12	Artificial fuel.
Hammer, E., Metcalfe, J., & Davies, E.	591	Feb. 14	Feeding steam-boilers and raising, &c. water.

Name.	Number of Applica- tion.	Date of Applica- tion.	Subject.
Hamer, W. - - - - -	4373	Nov. 11	Steam-trap.
" W. - - - - -	4397	Nov. 13	Steam-engine condensers.
" W. - - - - -	4438	Nov. 16	Ball-valves.
Hamilton, A. J. (<i>Wernear</i>) - - - - -	252	Jan. 21	Bath towel and dressing gown.
" J., & Frasi, F. - - - - -	2389	June 7	Stone-working machinery and tools.
" J. B. - - - - -	2071	May 16	Harmoniums, &c.
Hammond, E. C., & Edwards, E. & A. - - - - -	1840	May 2	Roller skates.
" H. W. - - - - -	623	Feb. 15	Roller skates.
" J., & Causer, W. G. - - - - -	4529	Nov. 22	Screwing-tackle.
" J. G., & Lecher, T. T. - - - - -	2760	July 6	Screw-stocks.
" R. - - - - -	2224	May 26	Lawn-tennis balls.
Hampden, J. - - - - -	2100	May 18	Ships, boats, &c., and propelling same.
Hampton, J. - - - - -	4441	Nov. 16	Flooring-cramps.
Hance, A., & Hornum, W. H. (<i>Lake</i>) - - - - -	2321	June 1	Registering railway fares, &c.
Hancock, D., & Duck, J. - - - - -	4794	Dec. 11	Ball, bib, and other valves.
Hancock, J. F. (<i>Morgan-Brown</i>) - - - - -	4078	Oct. 21	Injectors or inspirators.
Hancock, J. L. - - - - -	2521	June 17	Cleaning table knives.
" S., & Soar, W. - - - - -	3682	Sep. 20	Steam-boiler furnaces and flues.
Hancox, J. - - - - -	2325	June 2	Wheat-sheaf and straw elevators.
Hanctin, J. O. - - - - -	2641	June 27	Crushing, grinding, and mixing.
Handley, W., & Draper, M. - - - - -	899	Mar. 2	Fastenings for boots, gloves, &c.
Handyside, H. - - - - -	2932	July 18	Safety-clutches.
" J. B., Alley, S., & Carru- [thers, J. H.] - - - - -	3155	Aug. 9	Wheels.
Hanel, A. (<i>Johnson</i>) - - - - -	3571	Sep. 12	Closets or receptacles; disinfecting, &c. same
Hanhart, E. (<i>Gedge</i>) - - - - -	3205	Aug. 14	Self-acting mules.
Hann, E. M., & Ramsey, R. - - - - -	4860	Dec. 15	Preventing accidents from overwinding: [mines, &c.]
Hanna, D. - - - - -	1523	Apr. 10	Sewing-machines.
" H. B. - - - - -	1136	Mar. 16	War-ships and other vessels.
Hannan, J. - - - - -	1589	Apr. 13	Bottles and bottle-stoppers.
Hannan, J. F. (<i>Newton</i>) - - - - -	1841	May 2	Printers' galleys.
Hammer <i>Gummi Kamm Co.</i> (<i>Wirth</i>) - - - - -	973	Mar. 6	Bobbins.
Hansell, R. B. - - - - -	396	Feb. 1	Railway draw-gear and buffing apparatus.
" R. B. - - - - -	3066	July 31	Railway draw-gear and buffing apparatus.
Hansen, J. (<i>Schmidt</i>) - - - - -	2769	July 7	Utensil, &c. for French polishing.
Hansmann, J. - - - - -	1472	Apr. 6	Artificial school slates.
" J., & Neumann, H. - - - - -	3621	Sep. 15	Artificial school slates.
Hanson, J. - - - - -	225	Jan. 20	Treating sewage, &c. for manure.
Harbeck, C. F. - - - - -	1801	Apr. 28	Sewing-machines.
Hardcastle, R. A. - - - - -	3053	July 29	Speed or revolution indicators.
Harding, H. - - - - -	94	Jan. 8	Concrete building.
" R. G., & Melbourne, J. - - - - -	676	Feb. 18	Rolling leather.
" T. W. - - - - -	4011	Oct. 17	Circle and gill combs, gills, hackles, &c. and [pins for same]
Hardinge, H. A. - - - - -	1102	Mar. 14	Skates.
Hardisty, W. H., & Grayson, J. W. - - - - -	344	Jan. 28	Journals for reels, swifts, &c.
Hardman, J., Birtwistle, R., & Wilkin- [son, J.] - - - - -	5065	Dec. 30	Burnishing photographs.
Hardy, C. A. (<i>Mills</i>) - - - - -	2626	June 26	Folding stools and tables.
" J. & J. G. (<i>Johnson</i>) - - - - -	4704	Dec. 5	Railway brakes.
" J. G. & J. (<i>Johnson</i>) - - - - -	4704	Dec. 5	Railway brakes.
Hare, T. - - - - -	3777	Sep. 28	Dress-holders or suspenders.
Haresceugh, J. - - - - -	2686	June 29	Lids for excreta receptacles.
Hargreaves, B., & Blakey, R. - - - - -	116	Jan. 11	Washing and wringing machines.
" J. - - - - -	1782	Apr. 27	Sulphates and sulphuric acid.
" J. - - - - -	5001	Dec. 27	Apparatus employed in the absorption of gases.
" L., & Barrett, J. H. - - - - -	397	Feb. 1	Regulating, &c. flow of liquids.
" R., & Bardsley, J. - - - - -	1837	May 2	Drawing off liquors from casks.
Harley, J. (<i>Chadwick</i>) - - - - -	717	Feb. 21	Dyeing and printing fabrics.
Harling, W. - - - - -	162	Jan. 14	Railway signalling.
Harper, A. - - - - -	3546	Sep. 9	Wheels of carriages, perambulators, &c.
" J. - - - - -	3494	Sep. 5	Invalid or bed tables.

[Har]

APPLICANTS FOR PATENTS FOR THE YEAR 1876.

[Har]

Name.	Number of Application.	Date of Application.	Subject.
Harper, R. R. - - - - -	925	Mar. 4	Roller skates.
„ R. R., & Bairnsfather, S. - -	5	Jan. 1	Railway signals.
„ R. R., & Smith, W. - - -	3688	Sep. 20	Electro-magnetic signalling instruments.
Harrington, John - - - - -	332	Jan. 27	Treating real and imitation leather.
„ John - - - - -	440	Feb. 3	Wheel skates.
„ John - - - - -	1758	Apr. 26	Spring hinges.
„ John - - - - -	1759	Apr. 26	Roller skates.
„ John - - - - -	2946	July 19	Entering and escaping from burning buildings.
„ John - - - - -	3009	July 26	Game and implements for same.
„ John - - - - -	3290	Aug. 22	Artificial or imitation leather.
„ Josiah - - - - -	912	Mar. 3	Bottle and jar stands.
„ R. - - - - -	4315	Nov. 7	Nuts for screw-bolts.
Harris, C. - - - - -	2082	May 17	Fur boas and trimmings.
Harris, G. J., & Stanley, E. (Lake) -	4198	Oct. 30	Making paper bags.
Harris, H. G. - - - - -	4909	Dec. 19	Steam-pumps.
„ I. B. - - - - -	1243	Mar. 23	Attaching india-rubber to wheel-tyres, &c.
„ I. B. - - - - -	2139	May 20	Rollers for wool-washing machines.
„ I. B. - - - - -	2582	June 22	India-rubber valves.
„ John - - - - -	3841	Oct. 4	Motive-power engines.
„ John - - - - -	3986	Oct. 16	Rotary pumps, engines, and fans; transmitting [motion].
„ Joseph - - - - -	1626	Apr. 18	Road travelling apparatus.
„ P., & Longbottom, C. - - -	2927	July 18	Learning skating.
„ Richard - - - - -	4572	Nov. 25	Ventilating rooms and apartments.
„ Robert - - - - -	3674	Sep. 20	Purifying gas.
„ W., & Price, C. - - - -	1329	Mar. 28	Fire-arms.
Harrison, A., & Evans, J. - - -	2530	June 19	Stereotyping-apparatus.
„ B. - - - - -	4475	Nov. 18	Raising, lowering, &c. heavy bodies.
„ C. - - - - -	3096	Aug. 3	Wheel or roller skates.
„ C. W. - - - - -	492	Feb. 7	Applying magnetism to promoting health.
„ C. W. - - - - -	3570	Sep. 12	Extinguishing fires.
„ C. W. - - - - -	3623	Sep. 16	Preserving metals, wood, stone, &c.
„ G., & Brooks, S. - - - -	4635	Nov. 30	Spinning and doubling.
„ H. - - - - -	1960	May 10	Dry stench-trap.
„ H., Foster, J., & Smith, T. -	1802	Apr. 28	Utilising scrap steel.
„ J., Glendenning, W., & [Rayner, G.] - - - -	127	Jan. 12	Washing clothes, &c.
„ J., Glendenning, W., & [Rayner, G.] - - - -	3192	Aug. 12	Washing clothes; churning butter.
„ R. - - - - -	3597	Sep. 14	Fastenings for cuffs; studs.
„ R. - - - - -	4631	Nov. 30	Railway couplings.
„ T., & Frudd, J. M. - - -	1950	May 9	Hoes for farming.
„ T. W. - - - - -	4556	Nov. 24	Stationery cases.
„ W., & Browett, T. - - -	3700	Sep. 21	Bicycles and bicycle stands.
„ W., & Smith, L. - - - -	4578	Nov. 25	Cordon soufflé interwoven with pillow lace.
Harriss-Gastrell, J. P. - - - -	1440	Apr. 4	Roller skates.
„ J. P. - - - - -	4161	Oct. 26	Resisting impact in ships, &c.; obtaining flexibility in rink floors.
Harrobin, W. T., & Simmonds, G. H. [(Morgan-Brown). - - - -	311	Jan. 26	Cop-tubes.
Harrold, C. - - - - -	3309	Aug. 23	Watch pendants and tools for making same.
Harrow, H. - - - - -	1669	Apr. 21	Flower and fruit bag.
Hart, H. W. - - - - -	4155	Oct. 26	Extinguishing fire.
„ J. L. (Morgan) - - - - -	1678	Apr. 21	Gas-meters.
„ J. M. - - - - -	2566	June 21	Locks of safes, &c.
„ T. - - - - -	2015	May 13	Roller skates.
„ W. H. - - - - -	5051	Dec. 30	Balanced and ordinary valves and cocks.
Hartcliffe, W. - - - - -	1975	May 11	Lubricating spinning-machine spindles, &c.
Hartley, J., & Sugden, Z. - - -	138	Jan. 13	Lawn-mowers.
„ J. W., & Maw, A. - - - -	1328	Mar. 28	Screw or fly-presses.
Hartmann, R. (Scott) - - - -	4182	Oct. 28	Condenser carding-engines.
Hartnell, W. - - - - -	1852	May 2	Governing steam-engines.
Hartshorn, S., & Miller, R. J. - -	1883	May 5	Spring-rollers for blinds.

Name.	Number of Application.	Date of Application.	Subject.
Harwood, G., Scholes, J. B., & Roo- [croft, E.	5036	Dec. 29	Clearing yarns or threads.
" J. - - - - -	1781	Apr. 27	Sewing-machine shuttles.
Harvester Co., Johnston (Vaughan) -	145	Jan. 13	Reaping and harvesting machines.
" Co., Johnston (Vaughan) -	2783	June 28	Binding grain.
Harvey, J. - - - - -	4624	Nov. 29	Preserving meat, fish, &c.
" T. F., & Roe, J. P. - - - -	2353	June 6	Railways.
Harvie, A. - - - - -	2552	June 20	Tricycles, &c. obtaining rotary motion.
" W. - - - - -	3423	Aug. 30	Lamps for roofs, &c.
Haslam, L., & Marshall, C. - - -	1859	May 3	Looms.
" L., & Judge, J. - - - -	4798	Dec. 12	Making horse-shoes.
Hastie, J. - - - - -	3561	Sep. 11	Hydraulic motive-power and pumps.
Hastings, J. L., & W. H. (Imray) -	133	Jan. 12	Extinguishing fires.
" W. H., & J. L. (Imray) -	133	Jan. 12	Extinguishing fires.
Haswell, C. J. (Lake) - - - -	251	Jan. 21	Injectors.
Hattersley, R. L., & Pickles, T. -	83	Jan. 7	Looms.
" R. L., & Hill, J. - - - -	2408	June 10	Looms.
" T. - - - - -	4440	Nov. 16	Tube roving flyers.
" T. K. - - - - -	4862	Dec. 15	Lock top for flyers and spindles.
Hatton, E. - - - - -	4906	Dec. 19	Optical instrument for producing designs.
Hatton, J. G. - - - - -	362	Jan. 29	Packing material.
Haug, H. (Gössell) - - - - -	1207	Mar. 21	Reducing furnaces.
Haughian, C. P. (Mills) - - - -	354	Jan. 28	Compound steel rods, bars, plates, beams, &c.
Hantermann, H. G. (Lissignol) - -	804	Feb. 26	Reducing condensation of steam in ^{the} _[chests]
Haward, F. - - - - -	2302	May 31	Generating heat and steam.
Hawkesworth, D., & Colford, H. -	1154	Mar. 17	Spark-arrester.
Hawkins, C. G. - - - - -	3822	Oct. 3	Screw or worm gearing.
" H. - - - - -	194	Jan. 18	Gas-making.
" James, & Ritchie, G. - - - -	1508	Apr. 8	Doors and windows.
" James & J. - - - - -	3085	Aug. 2	Roller skates.
" John & J. - - - - -	3085	Aug. 2	Roller skates.
Haworth, A. J. - - - - -	4277	Nov. 6	Carding-engines.
Haws, A. J. (Mills) - - - - -	4792	Dec. 11	Steel converter bottoms and tuyeres and bricks [for same, &c.]
Hay, A. T. (Gardner) - - - - -	3515	Sep. 6	Reducing ores; making iron and steel; weld- [ing steel and flux for same]
Hay, S. F., & Goodchild, W. H. -	2123	May 19	Cutting meat, &c.; paring apples.
Haycraft, G. - - - - -	512	Feb. 9	Ammunition for ordnance.
Hayden, W. B. (Lake) - - - - -	4259	Nov. 3	Bale-ties and bale-hoop iron.
Haydock, J., & Blackburn, T. - -	3697	Sep. 21	Knitting-healds.
Hayford, W. J., & Wallis, C. E. -	3373	Aug. 28	Roller skates.
Hayne, H. J. (Faxon) - - - - -	931	Mar. 4	Steam-boiler tubes and flues.
Haynes, T. - - - - -	3828	Oct. 3	Lubricators.
" T. H., Moody, J. M., & Slade, [W. B. M. (Howe Spring Bed Co.)]	4882	Dec. 18	Spring-mattresses.
Hayward, H., & Hyatt, T. - - -	4026	Oct. 18	Chest-protector, respirator, &c.
Hazelton, M. W., & Lake, A. (Clark)	4126	Oct. 24	Spray-producers for decomposing water.
Hazlehurst, G. S. - - - - -	150	Jan. 14	Pumping liquids; pumping and condensing [gases]
" G. S. - - - - -	2527	June 19	Pumping, &c. liquids & gases; blowing engine.
Head, J. - - - - -	1027	Mar. 9	Motive-power engines.
Headley, W. L. (Lake) - - - - -	4029	Oct. 18	Fire-arms.
Headly, E. P. G., Hill, A., & Warden, [T.]	4467	Nov. 18	Implements for ridging, potato-raising, &c.
Heald, John - - - - -	4132	Oct. 25	Grinding, &c. india-rubbers and paints.
" Joseph, & Baxendale, R. - - -	771	Feb. 24	Railway draw-bars.
Healey, B. - - - - -	1849	May 2	Evaporating-apparatus.
" B. D. - - - - -	2733	July 3	Preparing asphalte.
" R. - - - - -	4911	Dec. 20	Supplying fuel to furnaces.
Heap, James, & Shaw, T. - - - -	4295	Nov. 7	Annealing-pans.
" Joshua - - - - -	4232	Nov. 1	Raising pile or nap of flannels, &c.
" Joshua - - - - -	4233	Nov. 1	Beaming and sizing yarns and threads.

Name.	Number of Application.	Date of Application.	Subject.
Heaps, E. K., & Wheatley, W. - - -	3378	Aug. 28	Steaming or cooking vegetables, &c.
Hearle, C. C. (Barlow) - - - - -	417	Feb. 2	Extinguishing fire.
Heath, D. - - - - -	1882	May 5	Washing-machines.
Heaton, C., & Tidcombe, G. - - -	472	Feb. 5	Paper-making.
" E. - - - - -	1755	Apr. 26	Punching boiler and other plates.
Heaven, A. - - - - -	3751	Sep. 26	Embroidering-machines and driving same.
Hebblethwaite, G. H. - - - - -	3028	July 27	Water-proof fabric.
Heck, J. H. - - - - -	5006	Dec. 27	Direct-acting steam-pumps.
Heckert, W. (Lake) - - - - -	3604	Sep. 14	Printing, paper-cutting and tag-making.
Heers, G. T. Van-, & Bourquin, C. A. - - -	3607	Sep. 14	Producing illuminated advertisements.
[Clark].			
Heinemann, F. (von Nawrocki) - - -	4965	Dec. 23	Bevil tenon cutting machine.
" L. (Jensen) - - - - -	525	Feb. 9	Composing and distributing type.
" L. (Jensen) - - - - -	4401	Nov. 13	Composing and distributing type.
Hellhoff, H. E. A. - - - - -	5000	Dec. 27	Ordnance and projectiles.
Helliwell, T. W. - - - - -	4062	Oct. 20	Fastening window-sashes.
Hellyer, R. W. - - - - -	3903	Oct. 10	Stop for doors and other appliances.
" S. S. - - - - -	4424	Nov. 15	Receptacles for house sewage, &c.; trapping [same.]
Helmsmüller, W. (Pieper) - - - - -	798	Feb. 25	Thrashing-machines.
Hélouis, N. A. (Clark) - - - - -	1143	Mar. 16	Metallic laces or trimmings.
Helwig, J. B., & Kaysser, A. & N. (Hughes)	3729	Sep. 23	Steam-gauge and safety-valve.
Hely, E. - - - - -	3934	Oct. 11	Printing, stamping, or embossing.
Hemingway, J. - - - - -	3681	Sep. 20	Scribbling and carding engines.
Hempstead, W. A., & Huntington, D. W. - - -	202	Jan. 18	Liquid-meters.
[Newton].			
" W. A., & Huntington, D. W. - - -	2635	June 26	Liquid-meters.
[Newton].			
Hempsted, R., & Watkinson, W. - - -	3008	July 26	Working cut-off slide-valves.
" R., & Holt, C. H. - - - - -	4256	Nov. 3	Making cranked shafts or axles.
Hemsley, W. - - - - -	1290	Mar. 25	Roller skates.
Hénard, E. (De Pass) - - - - -	111	Jan. 11	Fire-arms.
Henderson, A. C. (Taveau) - - - - -	3283	Aug. 19	Broom handle shield.
" A. C. (Rice & Bent) - - - - -	3518	Sep. 7	Winding, &c. yarn on to bobbins, and holding [ends of same in doffing.]
" A. C. (Guiraud) - - - - -	3529	Sep. 8	Cleaning river-beds and water-courses.
" A. C. (Bazille) - - - - -	3625	Sep. 16	Revolving metal shutters.
" A. C. (Debruge) - - - - -	3859	Oct. 6	Infants' feeding-bottles.
" A. G. - - - - -	2712	July 1	Gas-meters.
" A. L. - - - - -	1148	Mar. 17	Ceramic photographs.
" D. - - - - -	2296	May 31	Measuring corn, seeds, peas, &c.
" J. - - - - -	4274	Nov. 6	Stand for cooking, straining, &c. eggs.
" R. - - - - -	4032	Oct. 18	Tap for measuring, regulating, &c. liquids.
" T. - - - - -	3812	Oct. 2	Self-cleaning furnaces.
Henley, W. T. - - - - -	1944	May 9	Telegraph conductors; protecting telegraph [wires.]
Henly, R. - - - - -	3059	July 31	Bagatelle or game-board.
Henman, W. - - - - -	448	Feb. 4	Hanging window-sashes.
Hennah, T. H. - - - - -	21	Jan. 3	Roller skates.
Hennaman, J. T., & Brown, A. E. (Mills)	297	Jan. 25	Making cigars.
Hennault Bros. de, & Guinotte, L. (Lake)	4221	Nov. 1	Pressure-indicator.
Hennessey, P. B. (Brewer) - - - - -	835	Feb. 28	Safe time locks.
Henry, L. - - - - -	3734	Sep. 25	Substitute for white-lead.
" R. - - - - -	2784	July 8	Cutting screws and spiral mouldings.
Hensman, J. & W. - - - - -	2273	May 30	Agricultural drills.
" W. & J. - - - - -	2273	May 30	Agricultural drills.
Hepburn, R. H. - - - - -	284	Jan. 25	Buffers.
Heppel, R. T. - - - - -	1676	Apr. 21	Folding envelopes, &c.
Hepper, R. - - - - -	1336	Mar. 29	Agricultural machinery.
Herbert, C. E. - - - - -	2187	May 24	Organ.
" H. J. - - - - -	415	Feb. 2	Advertising.
Herberts, G., & Anschel, A. (Wülfling)	1958	May 10	Buttons.
Heron, M., & Kenyon, H. - - - - -	1628	Apr. 18	Blast furnaces.

Name.	Number of Application.	Date of Application.	Subject.
<i>Herrenschmidt, H. (Lake)</i> - - - -	2736	July 4	Furnaces for roasting.
<i>Herrshoff, J. B. & J. B. (Wise)</i> - -	4271	Nov. 4	Steam-boilers, &c. for steam-yachts.
<i>Herscher, E. & C. G., & Geneste, E. P.</i> [(Johnson).]	3857	Oct. 5	Portable ovens.
„ <i>C. G. & E., & Geneste, E. P.</i> [(Johnson).]	3857	Oct. 5	Portable ovens.
<i>Herts, A. C. (Herts)</i> - - - - -	2992	July 25	Pencil-sharpeners.
„ <i>A. C. (Anderson)</i> - - - - -	3492	Sep. 5	Protector for trouser bottoms.
„ <i>A. C. (Herts)</i> - - - - -	3736	Sep. 25	Abdominal supports.
„ <i>A. C., & Hoare, R.</i> - - - - -	2656	June 27	Folding tables.
<i>Herts, J. (Herts)</i> - - - - -	2992	July 25	Pencil-sharpeners.
„ <i>J. (Herts)</i> - - - - -	3736	Sep. 25	Abdominal supports.
<i>Herville, L. G. d., & Lippacher, I. (Browne)</i>	3182	Aug. 11	Bathing-apparatus; saving life.
<i>Herzen, A.</i> - - - - -	770	Feb. 24	Treating skins and hides.
<i>Herzog, C. A. (Morlet)</i> - - - - -	3285	Aug. 22	Watches.
<i>Hesse, F., & Siemens, F.</i> - - - -	3904	Oct. 10	Pottery ovens or kilns; utilising waste heat.
<i>Hessel, C.</i> - - - - -	640	Feb. 16	Skating surfaces.
<i>Hetherington, J. M., & Baker, J.</i> -	1800	Apr. 28	Mules.
„ <i>J. M., Pinel, M. P. A., &</i> [Lecœur, E. J. J.]	254	Jan. 21	Combing fibres.
<i>Heuer, F. W.</i> - - - - -	1662	Apr. 20	Printing on glass, &c.
<i>Heurtier (J. J.), Carré, & Co. (Clark)</i>	4356	Nov. 10	Cupola furnaces.
<i>Hewitt, H., & Toy, S.</i> - - - - -	1805	Apr. 29	Punching and pressing machine.
„ <i>T.</i> - - - - -	926	Mar. 4	Coupling, &c. railway waggons.
<i>Heydon, J.</i> - - - - -	4727	Dec. 7	Tightening wire-rope conductors or mining [cage slides.]
<i>Heyer, H.</i> - - - - -	3505	Sep. 6	Ruler for ruling lines.
„ <i>H.</i> - - - - -	3506	Sep. 6	Holder or file for papers, patterns, &c.
<i>Heyes, W., Hoyle, J., & Richards, J.</i>	1869	May 4	Forming ceilings and walls.
<i>Heyl, H. R. (Lake)</i> - - - - -	2499	June 16	Sewing or binding books with wire staples and [forming same.]
<i>Heyler, E. (Clark)</i> - - - - -	336	Jan. 27	Compressing air; motive-power.
<i>Heymann, M.</i> - - - - -	2857	July 13	Cutting and measuring instrument.
<i>Heywood, H. J.</i> - - - - -	241	Jan. 21	Horse-shoes and fitting same.
<i>Hibell, W.</i> - - - - -	4159	Oct. 26	Joining iron and steel wire.
<i>Hickman, T. H.</i> - - - - -	816	Feb. 28	Fettling for puddling furnaces.
<i>Hicks, J. J.</i> - - - - -	694	Feb. 18	Thermometers.
„ <i>J. J.</i> - - - - -	4900	Dec. 19	Thermometers.
„ <i>J. J., & Stutter, E. J.</i> - - -	668	Feb. 17	Rain-gauges.
„ <i>J. J., & Lowne, R. M.</i> - - -	1001	Mar. 8	Counting coins.
<i>Hickton, H., & Benson, W.</i> - - -	2830	July 11	Jacquard frames.
<i>Hiernaux, L. (Gedge)</i> - - - - -	5055	Dec. 30	Coal-tar hydro-carburets and amines of same.
<i>Higginbottom, J.</i> - - - - -	1945	May 9	Steam-boilers.
<i>Higgins, F. H. W., & Davies, W. H.</i>	3361	Aug. 26	Instruments for signalling fire-alarms, &c.
„ <i>J., & Whitworth, T. S.</i> - - -	3228	Aug. 16	Spinning and doubling fibres.
<i>Higginson, A.</i> - - - - -	2995	July 25	Motive-power engines.
<i>Higgs, R. W. H. P., & Loeffler, J. C. L.</i>	4461	Nov. 18	Electric-telegraphs.
<i>Hildebrandt, A., & Buckley, N.</i> - -	1668	Apr. 21	Looms.
„ <i>A., & Buckley, J. C.</i> - - -	4064	Oct. 20	Looms and jacquards.
<i>Hill, Albert</i> - - - - -	2044	May 15	Umbrellas and parasols.
<i>Hill, Alfred C., & Ingham, W. P.</i> -	712	Feb. 19	Making retorts, &c.
„ <i>Austin, Warden, T., & Headly,</i> [E. P. G.]	4467	Nov. 18	Implements for ridging, potato-raising, &c.
„ <i>C.</i> - - - - -	3184	Aug. 11	Kitchen-ranges and ships' cooking-stoves.
<i>Hill, C. F. (Bonneville)</i> - - - -	3438	Aug. 31	Musical instruments.
<i>Hill, C. G.</i> - - - - -	2740	July 4	Pleating-machines.
„ <i>D., & Hunter, D.</i> - - - - -	3531	Sep. 8	Safety and other valves.
„ <i>F. B.</i> - - - - -	16	Jan. 3	Steam fire-engine pumps.
„ <i>F. B., & Nishigawa, T. M.</i> - -	1317	Mar. 27	Gas-engines.
„ <i>F. B., & Nishigawa, T. M.</i> - -	3427	Aug. 31	Ice-making; cooling and refrigerating liquids [&c.]
„ <i>F. L.</i> - - - - -	500	Feb. 8	Tobacco pipes.
„ <i>J., & Hattersley, R. L.</i> - - -	2408	June 10	Looms.

Name.	Number of Application.	Date of Application.	Subject.
Hill, J. C., Pilliner, A. C., & Williams, W. [liams, W.]	4986	Dec. 23	Rolling rail ends and old rails into billets, &c.
Hill, J. R., & Webb, R. H. (Tongue)	1817	May 1	Fountain lamps.
Hill, S. - - - - -	3666	Sep. 19	Fastener for windows, cupboards, doors, &c.
Hill, T. (Clark) - - - - -	1763	Apr. 26	Solving navigation problems.
" T., & Williams, P. B. (Clark) - - - - -	2059	May 16	Steam-hammers.
Hill, W. W. - - - - -	184	Jan. 18	Bottles, jars, &c.; stoppers for same.
Hille, F. - - - - -	1355	Mar. 29	Treating sewage.
Hillman, W. - - - - -	1228	Mar. 22	Roller skate.
" W. - - - - -	3197	Aug. 12	Bicycles; bicycle and other wheels.
" W. - - - - -	4672	Dec. 2	Bicycles.
Hilton, J. - - - - -	3788	Sep. 28	Sewing-machines.
Himrod, C. (Clark) - - - - -	953	Mar. 6	Pig-iron; furnaces, &c. for making same.
Hinckley, C. M. (Hunt) - - - - -	1517	Apr. 10	Lasting boots and shoes.
Hinks, James & J., & Ford, R. - - - - -	1603	Apr. 15	Volatile oil lamps.
" John - - - - -	4072	Oct. 21	Lifts for hotels, warehouses, &c.
" Joseph - - - - -	4736	Dec. 7	Hydro-carbon oil lamps.
" Joseph & J., & Ford, R. - - - - -	1803	Apr. 15	Volatile oil lamps.
Hircock, J. T. M. - - - - -	2828	July 11	Hoeing and thinning out turnips, &c.
Hird, R., & Calvert, A. - - - - -	3695	Sep. 21	Securing glass in window-frames.
Hirsch, H. - - - - -	89	Jan. 7	Constructing ships.
" H. - - - - -	3649	Sep. 18	Heating water, &c.; generating steam.
" S., & Stern, M. (Schreiber) - - - - -	4855	Dec. 15	Locks.
Hirschhorn, J. - - - - -	4349	Nov. 10	Lamps and lamp-stoves.
Hirst, G. - - - - -	2440	June 13	Rolls for rolling metals.
" J. - - - - -	1870	May 4	Spring for washing-machines, &c.
Hiscox, G., & Sainty, J. & B. - - - - -	1127	Mar. 16	Separating grain and seeds.
Hjerleid, S. - - - - -	1245	Mar. 23	Screw-feeders for furnaces, &c.
" S. - - - - -	2486	June 15	Sulphate of soda and similar products.
Hoadley, G. C. (Hughes) - - - - -	2920	July 17	Pin packages and making same.
Hoard, J. W., & Vanstone, S. (Morgan-Brown).	4010	Oct. 17	Blanks for screws and threaded nails.
Hoare, R., & Herts, A. C. - - - - -	2656	June 27	Folding tables.
Hobbs, J. H. (King) - - - - -	4087	Oct. 23	Chandeliers, brackets and bracket-arms.
" T. J., & Tenney, C. F. (Lake) - - - - -	3088	Aug. 2	Children's carriages, chairs and tables.
Hobson, A. H. G. - - - - -	2944	July 19	Speed-indicators for engines and shafts.
" F. & Dyson, H. H. - - - - -	4914	Dec. 20	Rolling rails for spring steel and bars.
Hoch, J. G. H. - - - - -	839	Feb. 29	Clocks.
Hochapfel, frères (Redfern) - - - - -	2942	July 19	Tobacco pipes.
Hochgras, J. (Wirth) - - - - -	4237	Nov. 2	Controlling width of railway rails.
Hock, J. & Co. (Abel) - - - - -	3550	Sep. 9	Hot-air motor engines.
Höcker, Bros. (Jensen) - - - - -	1373	Mar. 30	Steam-boilers.
Hocking, J. - - - - -	1310	Mar. 27	Pumps for mines, &c.
Hodge, W. J. - - - - -	3807	Sep. 30	Roller and other skates.
Hodges, F. - - - - -	3408	Aug. 29	Elastic fabrics.
" J., & Butler, J. W. - - - - -	4247	Nov. 3	Paving slabs or blocks and making same.
" R. J. - - - - -	3760	Sep. 27	Drill-cramps.
Hodgetts, W. J. - - - - -	1914	May 6	Ornamenting glass articles.
Hodgson, G., Broadley, J., & Lister, J. - - - - -	3062	July 31	Looms.
" J. - - - - -	3866	Oct. 6	Punching or perforating paper with numbers, &c.
Hodson, G., & Tucker, G. - - - - -	484	Feb. 7	Kilns for bricks, pottery, lime, salt-glazing, &c.
Hoe, C. W. - - - - -	695	Feb. 19	Preventing slipping on roadways, &c.
Hoe, R. M. (Newton) - - - - -	2419	June 12	Preparing paper webs for printing.
" R. M., & Tucker, S. D. (Conquest) - - - - -	427	Feb. 2	Printing-machinery; cutting, folding, &c. sheets.
Hoeftmann, O. - - - - -	1014	Mar. 9	Gas-lighting.
Hoey, T. M. W. (Johnson) - - - - -	3951	Oct. 12	Compositions for preserving ships' bottoms.
Hoeltge, A. & F. (Mills) - - - - -	4305	Nov. 7	Elbows and curved pipes and making same.
" F. & A. (Mills) - - - - -	4305	Nov. 7	Elbows and curved pipes and making same.
Hoermann, G. E. A. - - - - -	3660	Sep. 19	Regulating reciprocating motion in motors, &c.
Hoevel, C. E. - - - - -	2679	June 29	Wheel or roller skates.
Hoey, D. G. - - - - -	2603	June 24	Blast furnaces.
" D. G. - - - - -	3111	Aug. 4	Blast furnaces.
" D. G. - - - - -	3262	Aug. 21	Blast furnaces.

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Holcroft, G., & Booth, F. W. - - -	1029	Mar. 9	Furnaces; retorts; crucibles.
Holden, John. - - - - -	3834	Oct. 4	Receptacles for containing acids, &c.
" John E. & J. - - - - -	3508	Sep. 6	Carding fibres.
" John E. & J. - - - - -	3509	Sep. 6	Washing wool and other fibres.
" John E. & J. - - - - -	3595	Sep. 14	Combing fibres.
" Jonathan & J. E. - - - - -	3508	Sep. 6	Carding fibres.
" Jonathan & J. E. - - - - -	3509	Sep. 6	Washing wool and other fibres.
" Jonathan & J. E. - - - - -	3595	Sep. 14	Combing fibres.
Holder, J. - - - - -	3937	Oct. 12	Reaping-machines.
Holding, J. - - - - -	1448	Apr. 5	Reducing wear of loom reeds.
" J. - - - - -	4227	Nov. 1	Looms.
Holford, H., & Slee, J., - - - - -	4650	Dec. 1	Valves for steam and other engines.
Holgate, J. - - - - -	226	Jan. 20	Loom-shuttles.
Holland, F. - - - - -	4944	Dec. 1	Match-box and cigar-clipper.
Holley, A. L. (Wise) - - - - -	3295	Aug. 22	Furnaces.
Hollingworth, James - - - - -	1503	Apr. 8	Spinning fibres.
" James & J. - - - - -	1150	Mar. 17	Looms.
" Joseph & J. - - - - -	1150	Mar. 17	Looms.
Holloway, G. - - - - -	48	Jan. 5	Paper-making.
" J. - - - - -	3314	Aug. 23	Producing metals or metallic alloys.
Holub, E. A. (Lake) - - - - -	1053	Mar. 10	Sewing-machines.
Hollway, J. - - - - -	1446	Apr. 5	Metals and metallic alloys.
Hollyer, G. - - - - -	3268	Aug. 19	Embossing on glass.
Holmes, A. E. - - - - -	4471	Nov. 18	Two-wheeled carriages.
" F., & Hopkinson, W. - - - - -	710	Feb. 19	Roller skates.
" F., & Blundell, G. T. & J. W. - - - - -	3763	Sep. 27	Pumps.
" J. E., & Payton, W. - - - - -	87	Jan. 7	Steam or other fluid engines; raising, &c. liquid
" J. M. (Brooker) - - - - -	1426	Apr. 3	Gas-stoves.
" J. M., & Lea, H. - - - - -	2697	July 14	Feeding fuel to furnaces, fire-boxes, &c.
" N. J. - - - - -	4218	Nov. 1	Danger flares for signalling.
" N. J., & Player, J. H. - - - - -	4125	Oct. 24	Signal-lights for marine purposes, &c.
" N. J., & Bryceson, J. - - - - -	4391	Nov. 13	Audible signals for fog-alarms, &c.
Holmes, T. J. (Lake) - - - - -	1895	May 5	Atomisers for perfumes.
Holroyd, E. A. - - - - -	1806	Apr. 29	Fishing-rod attachments.
" T. - - - - -	2293	May 31	Loom temples.
Holske, W. F., & Babbitt, B. T. (Clark) - - - - -	90	Jan. 7	Friction-clutches.
Holst, N. H. - - - - -	2624	June 26	Railway points and signals.
Holt, C., Sutcliffe, W., & Fisher, W. R. - - - - -	1574	Apr. 13	Thread-winder for sewing-machines.
" C. H. - - - - -	1026	Mar. 9	Boilers.
" C. H., & Ingham, O. - - - - -	269	Jan. 24	Steaming woven fabrics.
" C. H., & Hempsted, R. - - - - -	4256	Nov. 3	Making cranked shafts or axles.
Holt, H. (Clark) - - - - -	1146	Mar. 16	Hay, straw, &c., and ditching knife.
Holt, H. P. - - - - -	655	Feb. 17	Valves, &c. for motive-power engines.
" H. P. - - - - -	1133	Mar. 16	Motive-power engines.
" H. P. - - - - -	1581	Apr. 13	Tramways and propelling vehicles.
" H. P. - - - - -	2388	June 7	Propelling, &c. tramway vehicles.
" H. P. - - - - -	4127	Oct. 25	Auxiliary power steering gear.
" H. P. - - - - -	4323	Nov. 8	Steam tramway locomotives.
" H. P., & Spiller, A. F. - - - - -	4171	Oct. 27	Lubricating skate rollers.
" J. - - - - -	1307	Mar. 27	Raising sacks, &c.
Holthausen, F., & Kintzinger, A. (Clark) - - - - -	2213	May 25	Castors; roller skates.
Holyoake, W. R. - - - - -	2434	June 13	Exhibiting designs, advertisements, &c.
Hook, W. H. - - - - -	4507	Nov. 21	Envelopes and making same.
" W. H. - - - - -	4957	Dec. 22	Laying out paper, cards, &c. for "bordering."
Hooker, J. - - - - -	1596	Apr. 15	Mixing substances with milk.
" J. - - - - -	1597	Apr. 15	Preserved milk.
" J. - - - - -	2005	May 12	Distributing and setting up type.
" P., & Wright, E. - - - - -	1297	Mar. 25	Attachment for pole-chains, &c.
Hookham, G. - - - - -	1271	Mar. 24	Lines for pictures, window-sashes, &c.
Hooper, J. H. S. - - - - -	3671	Oct. 6	Rockets for saving life, &c.
Hopff, A. (Ulbrich) - - - - -	2018	May 13	Removing burrs from wool.
Hopkins, W., Haden, P., Beyfus, L. - - - - -	361	Jan. 29	Raising sunken vessels.
[& Picking, G. G.]			

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Hopkins, W. A. (Fox) - - - - -	1761	Apr. 26	Sash-fasteners.
" W. A. (Fox) - - - - -	3999	Oct. 16	Alloy as substitute for brass, &c.
Hopkinson, J. & J. A. - - - - -	5057	Dec. 30	Check or stop-valve for steam-boilers.
" J. A. & J. - - - - -	5057	Dec. 30	Check or stop-valve for steam-boilers.
" W., & Holmes, F. - - - - -	710	Feb. 19	Roller skates.
Hopps, W. - - - - -	1151	Mar. 17	Compressing seeds, for oil and into cakes, &c.
Hopwood, G. - - - - -	5067	Dec. 30	Looms.
Hore, W. H. - - - - -	4530	Nov. 22	Indicating whether doors, &c. are open or shut.
Hornbostel, C. (Morgan-Brown) - - - - -	5007	Dec. 28	Preparing, &c. oxygenated air for combustion.
Hornsby, R., Innocent, J., & Rutter, [G. T.] - - - - -	2890	July 14	Mowing and reaping machines.
Hornum, W. H., & Hance, A. (Lake) - - - - -	2321	June 1	Registering railway fares, &c.
Horrocks, John - - - - -	1218	Mar. 22	Steam-boilers.
" Joseph, & Schlesinger, F. E. - - - - -	4626	Nov. 29	Loom-pickers and picker-sticks.
Horse, E. H. (Smith) - - - - -	5026	Dec. 28	Safety railway carriage trucks.
Horton, H. - - - - -	3598	Sep. 14	Globe-holders for lamps.
Hotchkiss, B. B. (Morgan-Brown) - - - - -	2410	June 10	Metallic cartridges.
" B. B. (Morgan-Brown) - - - - -	2952	July 20	Projectiles for ordnance.
Hough, E. J. - - - - -	2329	June 2	Motive-power for submarine operations.
" J. E., Rothwell, F. & T., & [Shepherd, E.] - - - - -	4693	Dec. 5	Sewing-machine tables and stands.
Houghton, T., & Kaberry, L. - - - - -	2206	May 25	Spinning and doubling fibres.
House, H. - - - - -	4956	Dec. 22	Low-water detectors.
" R. E. - - - - -	2855	July 13	Reproducing record telegraphs.
Houston, R. P. - - - - -	4910	Dec. 20	Crank shafts.
Hovey, W. H., Curtis, T. A., & Taylor, [V. N. (Hughes)] - - - - -	1827	May 1	Gas-light extinguisher.
Howard, A. - - - - -	2319	June 1	Lowering ships' boats.
" E. - - - - -	4675	Dec. 2	Preventing waste of water in water-supply.
" James, & Bousfield, E. T. - - - - -	1429	Apr. 3	Tilling implements.
" James, & Bousfield, E. T. - - - - -	1586	Apr. 13	Harvesting-machines.
" John - - - - -	799	Feb. 26	Regulating flow of fluids, &c.
" John, Wilson, A. F., & King- [dom, H. W. A.] - - - - -	4014	Oct. 18	Controlling flow and preventing waste of [water, &c.]
Howard, Joseph, W., & Stebins, T. (Lake) - - - - -	3544	Sep. 9	Hydraulic elevating machinery.
Howard, R. L. - - - - -	4136	Oct. 25	Valve-gear for steam-engines.
" W. - - - - -	1	Jan. 1	Ink-erasers.
Howarth, J. - - - - -	1845	May 2	Heating calendering, &c. machines.
" T. - - - - -	157	Jan. 14	Tap for measuring, &c. liquids.
Howe, A. - - - - -	2157	May 22	Looms.
Howe, W. H. I. (Clark) - - - - -	3980	Oct. 14	Soldering ends of provision tins.
Howe Machine Co. (Stockwell) - - - - -	300	Jan. 25	Sewing-machines.
" Spring Bed Co. (Moody, Slade, [& Haynes]) - - - - -	4882	Dec. 18	Spring-mattresses.
Howell, E. J. - - - - -	3869	Oct. 6	Railway and tramway carriages.
" J. H., & Basire, J. - - - - -	4316	Nov. 8	Charging, &c. fuel in open fires.
" R. - - - - -	1110	Mar. 15	Penholders.
Howells, H. C. (Clark) - - - - -	1362	Mar. 30	Dental apparatus.
Howes, Babcock, & Co. (Lake) - - - - -	3901	Oct. 9	Separating grain from dust, &c.
Howitt, W. - - - - -	193	Jan. 18	Roller skates.
" W. - - - - -	870	Mar. 1	Roller skates.
" W. - - - - -	3642	Sep. 18	Roller skates.
Howse, H., & Durham, F. W. - - - - -	2128	May 19	Governors and speed-indicators.
Howson, R., & Godfrey, S. - - - - -	3692	Sep. 21	Gas furnaces and utilising same.
Hoyle, C., & Marriner, E. D. A. - - - - -	2627	June 26	Washing and drying wool, &c.
" J., Richards, J., & Heyes, W. - - - - -	1869	May 4	Forming ceilings and walls.
Hoynes, J. F. - - - - -	4981	Dec. 22	Drying manures and other substances.
Hoyt, A. & H. M. (Johnson) - - - - -	2045	May 15	Book-binding.
" H. M. & A. (Johnson) - - - - -	2045	May 15	Book-binding.
Huart, A. (Gardner) - - - - -	3496	Sep. 5	Spinning-machinery.
Hubbard, C. - - - - -	5023	Dec. 28	Shirt-front box.
Hubbard, G. W. (Clark) - - - - -	2056	May 16	Coffee-pots.
Hubbard, J. P., & Thiodon, A. - - - - -	4664	Dec. 2	Fastenings for wearing apparel.

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Hubbell, W. L. - - - - -	4795	Dec. 11	Covers for boxes, bottles, pouches, &c.
Huddart, J. D. E. - - - - -	746	Feb. 23	Motive-power.
" J. D. E. - - - - -	3306	Aug. 23	Motive-power.
Hudson, G. - - - - -	1219	Mar. 22	Tricycle.
" J. C. - - - - -	2391	June 8	Direct-acting steam-engines.
Huebscher, H. (Wise) - - - - -	4443	Nov. 16	Shaping metal for tongues of musical instru- [ments]
Huët, A. (Pitt) - - - - -	4759	Dec. 8	Constructing ships and propelling same.
Huggett, J. A. - - - - -	3920	Oct. 10	Making wrought nails.
Hughes, C. (Haddan) - - - - -	3347	Aug. 25	Railways.
Hughes, E. T. (Erdmann) - - - - -	443	Feb. 3	Shuttle spindles.
" E. T. (Cook & Porter Needle Co.) - - - - -	792	Feb. 25	Needle machines.
" E. T. (Laporte & Motz) - - - - -	1605	Apr. 15	Feeding steam-boilers.
" E. T. (Taylor, Hovey, & Curtis) - - - - -	1827	May 1	Gas-light extinguisher.
" E. T. (Buckley & Sawyer) - - - - -	2343	June 3	Curtain fixtures.
" E. T. (Tillmanns) - - - - -	2365	June 6	Revolving shutters or blinds.
" E. T. (Blythe) - - - - -	2651	June 27	Preserving wood and vegetable fibre.
" E. T. (Hoadley) - - - - -	2920	July 17	Pin packages and making same.
" E. T. (Jäggli) - - - - -	3728	Sep. 23	Drill or boring tool and stock.
" E. T. (Kayser, Kayser, & Helwig) - - - - -	3729	Sep. 23	Steam-gauge and safety-valve.
" E. T. (Tillmanns) - - - - -	4688	Dec. 4	Revolving shutters and blinds.
" E. T. (Wilcox) - - - - -	4977	Dec. 23	Steam-heaters.
" E. T. (Eccleston) - - - - -	4978	Dec. 23	Table cutlery.
" E. W. - - - - -	716	Feb. 19	Roller skates.
" E. W. - - - - -	3400	Aug. 29	Roller skates.
" G. D. - - - - -	2727	July 3	Consuming smoke, &c. in boiler furnaces.
" G. S. (Burgdorf) - - - - -	633	Feb. 16	Raising and lowering weights.
" Henry - - - - -	390	Jan. 31	Tram or road locomotives.
" Henry - - - - -	1064	Mar. 11	Tram or road locomotives.
" Henry - - - - -	3393	Aug. 28	Tram or road locomotives.
" Henry - - - - -	4113	Oct. 24	Regulating, &c. speed of locomotives.
Hughes, Henry (Downing & Hughes) - - - - -	4006	Oct. 17	Evaporating alkaline solutions.
Hughes, Hesketh - - - - -	2054	May 16	Embossing, perforating, folding, &c. fabrics.
" J. E. & Downing, N. B. (Dixon) - - - - -	1977	May 11	Making paper-pulp.
" J. E. & Downing, N. B. (Hughes) - - - - -	4006	Oct. 17	Evaporating alkaline solutions.
" R. H. - - - - -	3855	Oct. 5	Indicating overflow of cisterns, &c.
" N. H. - - - - -	1645	Apr. 19	Roller or rink skates.
Hum, E. - - - - -	3588	Sep. 13	Rim, mortise, and latch locks.
Humberstone, W. - - - - -	996	Mar. 8	Printing-machinery.
Humboldt Machines Manufacturing Co. - - - - -	1520	Apr. 10	Gas-engines.
" [(Wirth)] - - - - -			
Humfrey, C. - - - - -	1998	May 12	Treating mineral oils.
Humm, E. - - - - -	2104	May 18	Locking fish-plate nuts.
Humy, P. R. de Fauchaux d' - - - - -	553	Feb. 11	Making articles from glass, clay, &c.
" P. R. de Fauchaux d' - - - - -	4217	Oct. 31	Making, &c. articles of pottery and glass.
Hunt, B. (Planchon) - - - - -	646	Feb. 16	Jacquard apparatus.
" B. (Green) - - - - -	1255	Mar. 24	Setting and distributing type.
" B. (Smith) - - - - -	1312	Mar. 27	Burning lime or cement.
" B. (Lewis) - - - - -	1600	Apr. 15	Wringing and mangling.
" B. (Dussaud, Dussaud, Duchez, & Bendiger) - - - - -	1839	May 2	Tanning.
" B. (Palmieri) - - - - -	2163	May 22	Sunshades and umbrellas.
" B. (Roman) - - - - -	2943	July 19	Elastic-mattresses.
" B. (d'Alessandro) - - - - -	2965	July 21	Life-saving dress or garment.
" B. (Brook) - - - - -	3091	Aug. 2	Steam-boilers.
" B. (Ehrhardt) - - - - -	3103	Aug. 3	Treating postage and revenue stamps.
" B. (Gallet) - - - - -	3519	Sep. 7	Weaving looped or piled fabrics.
" B. (Adair Packing Co.) - - - - -	3564	Sep. 12	Packing for pistons.
" B. (Reynoso) - - - - -	3593	Sep. 13	Preserving alimentary matters.
" B. (d'Alessandro) - - - - -	3806	Oct. 10	Travelling satchel or purse.
" B. (Ashbury) - - - - -	4018	Oct. 18	Sad-irons and grinding same.
Hunt, F. S. (Hinckley) - - - - -	1517	Apr. 10	Lasting boots and shoes.

Name.	Number of Application.	Date of Application.	Subject.
Hunt, J. - - - - -	2738	July 4	Envelopes.
" T. F. - - - - -	3662	Sep. 19	Making lawn-tennis courts, &c.
" W. D. - - - - -	4357	Nov. 10	Wire-fences and barbs for same.
Hunter, D. & Hill, D. - - - - -	3531	Sep. 8	Safety and other valves.
" G. - - - - -	3740	Sep. 25	Stone-working apparatus.
Hunter, J. & J. E. (Clark) - - - - -	1237	Mar. 23	Spinning fibres.
" J. E. & J. (Clark) - - - - -	1237	Mar. 23	Spinning fibres.
Hunter, R. H. A. - - - - -	2850	July 12	Self-revolving hair-brushes.
" S., Pickering, F., & Swift, W. - - - - -	4191	Oct. 30	Envelopes used in extracting oil.
" T. S. - - - - -	530	Feb. 10	Battery for attack and defence.
" T. S. - - - - -	3072	Aug. 1	Battery for attack and defence.
Huntington, D. W., & Hempstead, W. A. - - - - -	202	Jan. 18	Liquid-meters.
" [(Newton). - - - - -			
" D. W., & Hempstead, W. A. - - - - -	2635	June 26	Liquid-meters.
" [(Newton). - - - - -			
Huntington, J., & Cadman, W. - - - - -	531	Feb. 10	Making marbled papers.
Huppe & Bender (Wirth) - - - - -	3273	Aug. 21	Fastening frames on bags.
Hurst, H. - - - - -	2545	June 20	Looms.
Hutcheson, J. - - - - -	1465	Apr. 6	Extinguishing fires in factories, &c.
Hutchings, R. J. - - - - -	1171	Mar. 18	Heating, pickling, &c. metal plates.
" R. J. - - - - -	2421	June 12	Cleaning metal plates.
" R. J. - - - - -	2632	June 26	Tin, terne, and metal plates.
" R. J. - - - - -	3006	July 25	Tin, terne, and metal plates.
" R. J. - - - - -	3481	Sep. 4	Cutting and shearing metal plates.
" R. J. - - - - -	4054	Oct. 20	Revivifying spent acid, &c. in pickling plates.
Hutchinson, H. - - - - -	15	Jan. 1	Hydro-metallurgy.
" R. H., & Tetlow, T. - - - - -	4929	Dec. 21	Looms.
Hutton, J. - - - - -	3067	July 31	Pistons.
Hyatt, J. W., & Crane, T. S. - - - - -	2523	June 17	Hydrostatic presses.
" T. - - - - -	1299	Mar. 27	Buildings; and materials; ornamenting build-ings, &c.
" T. - - - - -	2701	June 30	Buildings; and materials for building, road-making, &c.
" T. - - - - -	3579	Sep. 12	Building materials; buildings and building.
" T. - - - - -	4755	Dec. 8	Adhesive plasters, and making same.
" T., & Rickett, T. - - - - -	3615	Sep. 15	Wood-screws and making same.
" T., & Hayward, H. - - - - -	4026	Oct. 18	Chest-protector, respirator, &c.
Hyde, R. F. (Alexander) - - - - -	105	Jan. 10	Boat-detaching apparatus.
Hymans, H. - - - - -	5080	Dec. 30	Vegetable parchment.

I.

Ibbotson, A. B. (Lake) - - - - -	1607	Apl. 15	Railway couplings and buffers.
Ibbotson, W. - - - - -	3629	Sep. 16	Callendering, glazing, or coloring paper goods, &c.
Ice Factory, Barmen Artificial (Wirth) - - - - -	2601	June 23	Artificial ice.
Ifland, D., & Hadenfeld, E. (Abel) - - - - -	4165	Oct. 27	Indicating leeway and speed of vessels.
" D., & Hadenfeld, E. (Abel) - - - - -	4166	Oct. 27	Automatic feed for steam-boilers.
Illingworth, H. - - - - -	3359	Aug. 26	Treating fibres.
" R. - - - - -	3460	Sep. 2	Steam-boiler.
" W. - - - - -	4880	Dec. 18	Manufacture of flocks.
" W., & Zeidler, C. - - - - -	4303	Nov. 7	Making skeps and other baskets.
Imbs, J. (De Pass) - - - - -	2313	June 1	Combing fibres.
Imray, J. (Hastings & Hastings) - - - - -	133	Jan. 12	Extinguishing fires.
" J. (Granjon & Musy) - - - - -	2726	July 3	Support for railway travellers.
" J. (Brüll & Besson) - - - - -	5016	Dec. 28	Material of cork and fibrous pulp.
Industrielle Suisse, La Société (Johnson) - - - - -	1788	Apr. 28	Fire-arms.
Ingermann, L. (Johnson) - - - - -	4207	Oct. 31	Glass gauges.
Ingham, J. - - - - -	2576	June 22	Carding-engines.
" O., & Holt, C. H. - - - - -	269	Jan. 24	Steaming woven fabrics.
" W. P., & Hill, A. C. - - - - -	712	Feb. 19	Making retorts, &c.

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Inglis, W. - - - - -	2265	May 30	Steam-engines.
Innes, G., & Lill, R. - - - - -	1672	Apr. 21	Castors.
Innocent, J., Rutter, G. T., & Horns- [by, R.	2890	July 14	Mowing and reaping machines.
Ireland, F. C. (Johnson) - - - - -	5028	Dec. 29	Skates.
Ireland, J. (Blair) - - - - -	2677	June 29	Reducing oxide ores of iron, &c.
" J. (Blair) - - - - -	4520	Nov. 21	Reducing metallic ores.
" J., & Blair, T. S. - - - - -	4958	Dec. 22	Reducing metallic ores.
" W. - - - - -	1376	Mar. 30	Indicating speed of revolving surfaces; ascer- taining draft in spinning; measuring alivers.
" W., & Blass, E. - - - - -	3211	Aug. 15	Treating iron and steel for cleansing, coating, [annealing, &c.
Isherwood, C. E. R. - - - - -	1287	Mar. 25	Dampers for steam-boilers.
Ivimy, J. (Long) - - - - -	3458	Sep. 1	Material for a carpet lining.
J.			
Jablochhoff, P. - - - - -	836	Feb. 29	Electro-magnet.
Jablochhoff, P. (Applegarth) - - - - -	3552	Sep. 11	Electric-light.
Jack, A. - - - - -	3827	Sep. 16	Self-delivery reaping-machines.
" R. G. - - - - -	4960	Dec. 22	Tricycles.
Jackson, B. F. (Clark) - - - - -	2197	May 24	Harvesters.
Jackson, C. - - - - -	3366	Aug. 28	Solitaires, studs, and glove-fasteners.
" C. & W. H. - - - - -	4618	Nov. 29	Toast-racks, cruet-frames, liqueur-cases, &c.
" F. - - - - -	337	Jan. 28	Sky-light and sash-bars.
" G., & Lord, W. - - - - -	4772	Dec. 9	Looms.
" H., & Milburn, R. - - - - -	1183	Mar. 20	Drying and concentrating sewage, &c.
Jackson, H. F. J. (Jackson) - - - - -	465	Feb. 4	Glass mirrors, facias, tablets, &c.
Jackson, James - - - - -	2551	June 20	Carding fibres.
" Josiah - - - - -	60	Jan. 6	Bicycles.
" R. - - - - -	377	Jan. 31	" Merry-go-rounds."
" S. (Jackson) - - - - -	465	Feb. 4	Glass mirrors, facias, tablets, &c.
" W. - - - - -	2869	July 13	Furnaces.
" W. G. - - - - -	4627	Nov. 30	" Kick-ups " or tipping-cradles.
" W. H. & C. - - - - -	4618	Nov. 29	Toast-racks, cruet-frames, liqueur-cases, &c.
" W. L. - - - - -	539	Feb. 10	Rolling leather.
" W. L. - - - - -	1498	Apr. 8	" Stuffing " leather.
" W. L. - - - - -	1776	Apr. 27	" Stuffing " leather.
" W. L., & Asquith, R. - - - - -	120	Jan. 11	Stocks for leather-making, &c.
Jacob, C. M. - - - - -	3044	July 28	Sealing bottles and jars.
" C. M. - - - - -	3605	Sep. 14	Capsuling or sealing bottles and jars.
Jacobi, R. (Clark) - - - - -	4609	Nov. 28	Brakes and brake-wheels for carriages.
Jacquel, P. (Tongue) - - - - -	3784	Sep. 28	Screw-propellers.
Jaeger, G. L. (Lake) - - - - -	777	Feb. 24	Lining and drying pasteboard for sizing, &c. [materials; adhesive compounds.
Jäggli, J. (Hughes) - - - - -	3728	Sep. 23	Drill or boring tool and stock.
Jahn, O., & Bayer, C. H. G. - - - - -	2428	June 12	Boot-cleaning machine.
Jakeman, C. J. W., & Merryweather, H. - - - - -	3727	Sep. 23	Tramway locomotives, &c.
" C. J. W., & Merryweather, H. - - - - -	4402	Nov. 13	Steam tram-cars or locomotives.
Jamelin, V. (Smith) - - - - -	2182	May 23	Lathe-frames.
James, S. H. - - - - -	4145	Oct. 25	Screws, bolts, and nuts.
" W., Bromley, U., & Crowe, G. - - - - -	4830	Dec. 14	Motive-power engines; pumps; water-meters.
Jamieson, A., & King, W. F. - - - - -	4167	Oct. 27	Grapnels for submarine cables.
Janeway, J. J. - - - - -	2542	June 19	Securing figure-plates, &c. to printing rolls.
Janse, L. - - - - -	238	Jan. 25	Direction indicator and compass.
Janson, J. W. (Gallien) - - - - -	4528	Nov. 22	Blades for knives of hide-shaving machines.
Japy, E. (Daillier) - - - - -	1135	Mar. 16	Computating cock for liquors.
Jarves, J. J., & de Ferrari fu An- [gelo, G. B.	3630	Sep. 16	Heating steam-boilers, furnaces, &c.
Jarvis, J. E. - - - - -	4603	Nov. 28	Horse-shoes.

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<i>Jawley, J. S., Sangster, J., Clay, H. M.,</i> [& Van Vleck G. H. (Lake).]	857	Feb. 29	Fare-registers for tram-cars, &c.
Jay, R. C. - - - - -	2570	June 21	Skates.
Jeanneret, H. - - - - -	2371	June 6	Treating iron articles, &c.
Jeanvoine, A. (Clark) - - - - -	4212	Oct. 31	Composition for extinguishing fire.
Jefferies, J. E. - - - - -	2874	July 13	Colour-printing and embossing.
Jeffers, M. C., Beecher, E. F., Armstrong, [A. P., & Thiers, W. F. (Mills).]	3585	Sep. 13	Ventilating, disinfecting, and fog-alarms for [ships, &c.
Jeffery, T. - - - - -	4108	Oct. 24	Cutting and splitting wood.
Jefferys, J. C. W. - - - - -	697	Feb. 19	Jewellery and dress-fastenings.
„ J. C. W. - - - - -	1529	Apr. 11	Scarf-rings and dress-fastenings.
„ J. C. W. - - - - -	4811	Dec. 13	Studs, purses, gloves, bags, harness, &c.
Jeffrey, J. A., Lechner, F. M., & Ses- [sions, F. C. (Haddan).]	1707	Apr. 22	Mining-machines.
Jeffreys, E. A. - - - - -	636	Feb. 16	Railway wheels.
Jeffries, G. L. - - - - -	2335	June 3	Cartridge case-boiler and re-capper.
Jenison, E. S. (Alexander) - - - - -	2488	June 15	Heating and ventilating buildings, &c.
Jenkin, F. - - - - -	832	Feb. 28	Regulating flow of fluids.
„ F., & Thomson, Sir W. - - - - -	1095	Mar. 13	Telegraphs.
Jenkins, F. - - - - -	754	Feb. 23	Boxes, portmanteaus, cabinets, &c.
Jenkins, H. M. (Newton) - - - - -	352	Jan. 28	Sewing needles.
„ H. M., & Baylis, H. (Clark)	1748	Apr. 25	Pins.
Jenkins, J., Jones, J., Thomas, D., & [Williams, D.]	1120	Mar. 15	Utilising old annealing pots of tin-plate works.
Jenks, S. A. (Clark) - - - - -	305	Jan. 26	Gates for railway crossings.
Jenney, W. P. (Newton) - - - - -	1973	May 11	Treating refuse from distillation of petroleum, [&c. for products.
„ W. P. (Newton) - - - - -	2339	June 3	Treating refuse from distillation of petroleum, [&c. for products.
Jennings, G. - - - - -	4935	Dec. 21	Water-closets and latrines; water-valves.
„ G., & Anderson, G. - - - - -	2470	June 14	Propagating and preserving oysters.
„ H. - - - - -	4490	Nov. 20	Boots and shoes.
Jennison, J. - - - - -	412	Feb. 2	Tilting barrels; test gauge.
Jensen, P. (Dietrich) - - - - -	214	Jan. 19	Bottle-stopper.
„ P. (Heinemann) - - - - -	525	Feb. 9	Composing and distributing type.
„ P. (Guerrant & Leventhorpe) - - - - -	842	Feb. 29	Liquid and fluid meters,
„ P. (La Cour) - - - - -	843	Feb. 29	Telegraphy.
„ P. (Höcker Bros.) - - - - -	1373	Mar. 30	Steam-boilers.
„ P. (Achtelstetter & von Sawic- [zewsky].)	1492	Apr. 7	Preserving meat.
„ P. (Brandt & von Nawrocki)	1810	Apr. 29	Galvanic-batteries.
„ P. (Anglin) - - - - -	1862	May 3	Fire-alarms for buildings.
„ P. (Osenbrück) - - - - -	2099	May 18	Railway wheels & axles and lubricating same.
„ P. (Pollack) - - - - -	2330	June 2	Extincteurs.
„ P. (Pekár) - - - - -	2392	June 8	Testing meal and flour.
„ P. (Wahlenberg) - - - - -	2420	June 12	Treating nitrated alkalies.
„ P. (Wahlenberg) - - - - -	2422	June 12	Explosive compounds.
„ P. (Radway & Daniels) - - - - -	2644	June 27	Umbrella and parasol frames.
„ P. (Kulbrich) - - - - -	2837	July 12	Photographic albums.
„ P. (Laundgreen) - - - - -	2889	July 14	Shirt-fronts.
„ P. (Muchin) - - - - -	2891	July 14	Brick and tile-making machines.
„ P. (Muchin) - - - - -	2904	July 15	Preparing fibres, &c.
„ P. (Pollack) - - - - -	4257	Nov. 3	Sewing-machines.
„ P. (Bricknell & Hall) - - - - -	4331	Nov. 9	Cast-metal pulleys and making same,
„ P. (Heinemann) - - - - -	4401	Nov. 13	Composing and distributing type.
„ P. (Smyth) - - - - -	4924	Dec. 20	Attaching paper sheets together to form books, [&c.
Jerome, E., & Wheeler, S. (Tindell) - - - - -	3129	Aug. 5	Making boxes and hollow articles.
Jesson, T., & Duggan, T. - - - - -	3026	July 27	Brooms and brushes.
Jeune, J. W. - - - - -	1439	Apr. 4	Artificial leather.
Jewell, S. - - - - -	3987	Oct. 16	Fire-escapes.
Jewett & Root (Lake) - - - - -	3984	Oct. 14	Stoves.
Jewitt, H. (Rose) - - - - -	3590	Sep. 13	Fluting or goffering machines.

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Jewitt, W. J. - - - - -	4486	Nov. 20	Steam-engines.
Joannard, M. (Clark) - - - - -	1315	Mar. 27	Feeding-bottles.
Joannès, P. - - - - -	469	Feb. 5	Corrugating wire for lattice-work.
" P. - - - - -	2480	June 15	Corrugating wire for lattice-work.
Jobson, A. H. & H. C., & Johnson, H. - - - - -	3854	Oct. 5	Coal-tubs, railway-waggons, &c.
" H. C. & A. H., & Johnson, H. - - - - -	3854	Oct. 5	Coal-tubs, railway-waggons, &c.
" J. - - - - -	538	Feb. 10	Stoves or fire-places.
Jochumson, N. - - - - -	3204	Aug. 14	Steering gear.
Johns, T. H. - - - - -	31	Jan. 4	Raising or forcing beer, &c.
Johnson, A. - - - - -	2033	May 15	Roller skates.
Johnson, D. A., Beers, W., & Pray, J. F., [& B. S. (Lake).]	3652	Sep. 18	Axles and axle-boxes.
Johnson, E. - - - - -	67	Jan. 6	Shoes for animals.
" E. G. - - - - -	1427	Apr. 3	Pencil-cases, pen-holders, tooth-picks, &c.
" G. H. & T. - - - - -	1177	Mar. 18	Colliery-tubs.
" H. - - - - -	3722	Sep. 23	Colliery-tubs.
" H., & Jobson, H. C. & A. H. - - - - -	3854	Oct. 5	Coal-tubs, railway waggons, &c.
Johnson, I., & Bye, M. (Lake) - - - - -	2257	May 29	Air-pistols and guns.
Johnson, Jacob S. & J. St. J. S. - - - - -	3408	Aug. 29	Detaching or disengaging ships' boats.
" John, & Wayne, R. - - - - -	585	Feb. 12	Fire-arms.
" John Henry (Giutard) - - - - -	25	Jan. 3	Warming railway carriages and tram-cars.
" J. H. (Mignon & Rouart) - - - - -	54	Jan. 5	Presses.
" J. H. (Kessler) - - - - -	107	Jan. 10	Joints for pipes or hose.
" J. H. (Gibbs) - - - - -	139	Jan. 13	Sewing-machines.
" J. H. (Ruth) - - - - -	163	Jan. 15	Stereotype plates, casts and forms.
" J. H. (Nolden) - - - - -	273	Jan. 24	Purifying water.
" J. H. (Brandt) - - - - -	425	Feb. 2	Boring rock.
" J. H. (Wertheim) - - - - -	491	Feb. 7	A lubricating packing.
" J. H. (Albaret) - - - - -	514	Feb. 9	Transmitting power; multiplying speed, &c.
" J. H. (Smith) - - - - -	723	Feb. 21	Printing and ornamenting metal.
" J. H. (Paillard) - - - - -	811	Feb. 26	Artificial fuel.
" J. H. (Ponsard) - - - - -	1047	Mar. 10	Making steel; treating, &c. cast metals.
" J. H. (Caro) - - - - -	1229	Mar. 22	Obtaining colouring matters.
" J. H. (Cussagnes) - - - - -	1282	Mar. 25	Treating vibrating parts of musical instruments. &c.
" J. H. (Fergus, Colket, & Brown) - - - - -	1352	Mar. 29	Injectors.
" J. H. (Weiler) - - - - -	1453	Apr. 5	Caps for spinning spindles.
" J. H. (Empire Vacuum Brake [Co.]	1538	Apr. 11	Air-brakes and ejectors.
" J. H. (Sellers & Sellers) - - - - -	1588	Apr. 13	Motive-power engines.
" J. H. (Buss) - - - - -	1604	Apr. 15	Governors or speed regulators.
" J. H. (Dollander) - - - - -	1733	Apr. 24	Sizing and dressing yarn.
" J. H. (Stone) - - - - -	1748	Apr. 25	Railways and rolling stock.
" J. H. (La Société Industrielle [Suisse].)	1788	Apr. 28	Fire-arms.
" J. H. (Hoyt & Hoyt) - - - - -	2045	May 15	Book-binding.
" J. H. (Smith) - - - - -	2070	May 16	Artificial stone.
" J. H. (Vautherin) - - - - -	2093	May 18	Railways.
" J. H. (Ozle) - - - - -	2113	May 18	Grinding corn.
" J. H. (Goulson) - - - - -	2299	May 31	Gas-meters.
" J. H. (Meunier & Grün) - - - - -	2322	June 2	Combing fibres.
" J. H. (Stewart) - - - - -	2350	June 5	Gas-making.
" J. H. (Wooten) - - - - -	2442	June 13	Combustion of fuel in furnaces.
" J. H. (Christofle & Bouilhet) - - - - -	2519	June 17	Treating ores containing nickel.
" J. H. (Sellers, Sellers, & Sellers) - - - - -	2597	June 23	Shaping, welding, &c. metal.
" J. H. (Lissagaray) - - - - -	2614	June 24	Manure.
" J. H. (Juron) - - - - -	2684	June 29	Cocks.
" J. H. (Nezeraux) - - - - -	2755	July 5	Balances for indicating weight, &c.
" J. H. (Steinmetz) - - - - -	2798	July 8	Locks for bags, &c.
" J. H. (Clere) - - - - -	2815	July 11	Extracting zinc from its ores, &c.
" J. H. (Cosson) - - - - -	2816	July 11	Cartridges and explosive projectiles.
" J. H. (Sellars) - - - - -	2844	July 12	Refining and condensing iron and steel.
" J. H. (Mitchell & Roby) - - - - -	2845	July 12	Railway couplings.

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Johnson, J. H. (<i>Dodé</i>) - - - -	3971	July 21	Coating or covering metals.
" J. H. (<i>Pion</i>) - - - -	3986	Aug. 2	Rolling metal.
" J. H. (<i>Notré</i>) - - - -	3257	Aug. 19	Food safes.
" J. H. (<i>Charbonnier & Charbonnier</i>). - - - -	3298	Aug. 22	Photographing upon or ornamenting glass, &c.
" J. H. (<i>de Mersanne</i>) - - - -	3315	Aug. 23	Producing electric-light for signalling, &c.
" J. H. (<i>Wertheim</i>) - - - -	3444	Sep. 1	Motive-power.
" J. H. (<i>Vicomte de Beaumont</i>) - - - -	3451	Sep. 1	Vaults or arches and ventilating, &c. same.
" J. H. (<i>Latouche Bros.</i>) - - - -	3490	Sep. 5	Carpets and rugs.
" J. H. (<i>Grüneberg</i>) - - - -	3551	Sep. 9	Treating iron residues in purifying gas.
" J. H. (<i>Hanel</i>) - - - -	3571	Sep. 12	Closets or receptacles; disinfecting, &c. same.
" J. H. (<i>Ten Brink</i>) - - - -	3661	Sep. 19	Steam-boilers.
" J. H. (<i>Dion & Baylis</i>) - - - -	3706	Sep. 21	Treating iron and steel.
" J. H. (<i>Alder</i>) - - - -	3791	Sep. 29	Applying counter-pressure to engine levers, &c.
" J. H. (<i>Postle</i>) - - - -	3792	Sep. 29	Motive-power; condensing, &c. gases.
" J. H. (<i>Landerberger</i>) - - - -	3835	Oct. 4	Knitted fabrics and producing same.
" J. H. (<i>Geneste, Herscher, & Herscher</i>). - - - -	3857	Oct. 5	Portable ovens.
" J. H. (<i>Zachariae</i>) - - - -	3925	Oct. 11	Pianofortes, &c.
" J. H. (<i>Hoeg</i>) - - - -	3951	Oct. 12	Compositions for preserving ships' bottoms.
" J. H. (<i>Schmalz & Corbin</i>) - - - -	4111	Oct. 24	Sugar-making.
" J. H. (<i>Adamson</i>) - - - -	4112	Oct. 24	Treating substances with hydro-carbons, &c.
" J. H. (<i>Tardy</i>) - - - -	4206	Oct. 31	Attaching or securing armour-plates.
" J. H. (<i>Ingermann</i>) - - - -	4207	Oct. 31	Glass gauges.
" J. H. (<i>Pohlig</i>) - - - -	4300	Nov. 7	Steam-boilers.
" J. H. (<i>Legru & Sencier</i>) - - - -	4301	Nov. 7	Refining saccharine liquids, &c.
" J. H. (<i>Schaffer & Frits</i>) - - - -	4302	Nov. 7	Cigarettes.
" J. H. (<i>Gardner & Forsyth</i>) - - - -	4307	Nov. 7	Pulp-engines.
" J. H. (<i>Duhamel & Fassin</i>) - - - -	4400	Nov. 13	Cooking-apparatus.
" J. H. (<i>Marrel Bros.</i>) - - - -	4506	Nov. 21	Armour-plates.
" J. H. (<i>Marrel Bros.</i>) - - - -	4509	Nov. 21	Armour-plates.
" J. H. (<i>Mäuser Bros.</i>) - - - -	4511	Nov. 21	Fire-arms.
" J. H. (<i>Oliver</i>) - - - -	4607	Nov. 28	Military and other accoutrements.
" J. H. (<i>Townsend</i>) - - - -	4628	Nov. 30	Making nut-blanks.
" J. H. (<i>Hardy & Hardy</i>) - - - -	4704	Dec. 5	Railway brakes.
" J. H. (<i>Völkner</i>) - - - -	4713	Dec. 6	Malting and apparatus for same.
" J. H. (<i>Marrel Bros.</i>) - - - -	4761	Dec. 8	Armour-plates and producing same.
" J. H. (<i>La Société de Commission de Consignations et de Transports</i>). - - - -	4852	Dec. 15	Furnaces or fire-places.
" J. H. (<i>Molin</i>) - - - -	4870	Dec. 16	Manufacture of bobbin-net lace.
" J. H. (<i>Ireland</i>) - - - -	5028	Dec. 29	Skates.
" J. H. (<i>Mauge</i>) - - - -	5045	Dec. 29	Reaping and mowing machines.
" J. H. (<i>Tardy</i>) - - - -	5062	Dec. 30	Protecting ships, &c. against injury from projectiles.
Johnson, John R. (<i>Morgan-Brown</i>) - - - -	1563	Apr. 13	Locomotive-engines.
Johnson, John S. (<i>Carr</i>) - - - -	1656	Apr. 20	Wheel or roller skates.
" John St. J. S. & J. S. - - - -	3406	Aug. 29	Detaching or disengaging ships' boats.
" R. L. - - - -	2678	June 29	Door-knocker.
" Samuel - - - -	457	Feb. 4	Washing and disintegrating clay.
" Samuel - - - -	4842	Dec. 14	Gas-meters.
" Samuel H. - - - -	264	Jan. 22	Preparing ferro-cyanides.
" Samuel H. - - - -	2741	July 4	Filter-presses.
" Sidney - - - -	518	Feb. 9	Distance indicator for vehicles.
" T. - - - -	2861	July 13	Bricks, quarries, and tiles.
" T. & G. H. - - - -	1177	Mar. 18	Colliery-tubs.
" W. - - - -	2441	June 13	Smoking pipes and tubes.
" W., & Phillips, J. - - - -	180	Jan. 17	Mounting wheels of traction-engines, &c.
" W. C., & Phillips, S. E. - - - -	3533	Sep. 8	Telegraph-cables.
" W. C., & Phillips, S. E. - - - -	3534	Sep. 8	Telegraph-insulators.
" W. H., & Armitage, W. - - - -	3238	Aug. 17	Weaving wire-gauze.
" W. N. - - - -	4747	Dec. 7	Lavatories.

Name.	Number of Application.	Date of Application.	Subject.
Johnston, J. B.	2259	May 29	Checks; money-orders, &c.
Johnston, J. L. (Auld)	4782	Dec. 11	Preparing and combining substances for food
" S. (Lake)	1555	Apr. 12	Binding wheat sheaves, &c.
" S. (Lake)	1822	May 1	Harvesting-machines.
" S. (Lake)	2795	July 8	Reaping-machines.
Johnston, T.	2683	June 29	Golf-clubs.
Johnston Harvester Co. (Vaughan)	145	Jan. 13	Reaping and harvesting machines.
" Harvester Co. (Vaughan)	2673	June 28	Binding grain.
Johnstone, J.	2416	June 12	School desks and seats.
Johnstone, J. J., & Straiton, J.	185	Jan. 18	Cleaning skins.
Jolissaint-Vonèche, & La Société Comte [& Mabut (Tongue)]	1476	Apr. 6	Textile leather.
Jones, A. W., & Chamberlain, H.	2865	July 13	Solitaires and studs.
" D.	4431	Nov. 16	Stopping or retarding railway trains.
" E. A. & J. A.	3952	Oct. 12	Making iron and steel.
" F. W.	3083	Aug. 2	Indicating if closets or rooms are engaged, &c.
" Harry E.	1063	Mar. 11	Regulating, &c. pressure of gas.
" Harry, Langston-	1682	Apr. 21	Disinfectants and deodorisers.
" Henry, & Cook, E.	3555	Sep. 11	Rolling hoop-iron.
" Hugh, & Lewis, J.	928	Mar. 4	Roller skates.
" J., Thomas, D., Williams, D., [& Jenkins, J.]	1120	Mar. 15	Utilising old annealing pots of tin-plate works
" J. A. & E. A.	3952	Oct. 12	Making iron and steel.
" J. G.	793	Feb. 25	Boring and breaking down coal, &c.
" J. G.	3573	Sep. 12	Indicating speed of ships' railway carriages, &c.
" M. P.	917	Mar. 3	Rink or parlour skates.
Jones, O. (Lake)	2777	July 7	Revolving cylinder pistols.
Jones, P.	2575	June 22	Blankets.
" R. J.	2809	July 10	Clog-blocks.
" T. H., & Ellis, G.	1421	Apr. 3	Dressing slates.
" W.	1055	Mar. 11	Sewing-machines.
Jordan, L.	481	Feb. 7	Pumps and beer-engines.
" T. R.	2719	July 1	Roller skates.
Jouice, L. Z. (Vaughan)	1293	Mar. 25	Sugar-making.
Jowett, G., & Rushworth, C.	3136	Aug. 8	Bottle-stoppers and securing same.
" J.	3913	Oct. 10	Preventing rattling of windows, &c.
" J., & Sergeant, J.	2188	May 24	Combing fibres.
" J., & Wood, E.	3242	Aug. 17	Boiler-furnace and other doors.
Joy, D.	4707	Dec. 5	Motive-power engines.
Joyce, A. E.	1962	May 10	Roller skates.
" R. J. S., & Weintraud, F.	3436	Aug. 31	Solitaires and studs.
Jubber, H.	4740	Dec. 7	Raising sunken ships, &c.
Judge, J.	2796	July 8	Railway signals.
" J.	4691	Dec. 4	Signalling to drivers of locomotives.
" J., & Haslam, L.	4796	Dec. 12	Making horse-shoes.
" T.	2990	July 24	Cases for storage, &c. of explosives.
Judson, E.	4568	Nov. 25	Explosive compounds.
Julien-Sauve, H., & Krafft, L.	4976	Dec. 23	Treating iron, Bessemer, Martin, and other [metals for forming into steel]
Jullien, A. (Browne)	4495	Nov. 21	Metallic alloys of iron, &c.
" A. (Ledger)	4499	Nov. 21	Making cast steel and hardening same.
Jullien, E., & Carré, F. P. E.	3594	Sep. 13	Refrigerating-apparatus.
Junod-Pattus, A. L. (Clark)	2797	July 8	Keyless repeating watches.
Juron, C. (Johnson)	2684	June 29	Cocks.
Justice, P. S.	1077	Mar. 11	Cases for covering objects.
" P. S.	4757	Dec. 8	Extinguishing sparks and condensing exhaust [steam in engines]
" P. S. (Shaw)	234	Jan. 20	Steam-engines; steam and vacuum brakes.
" P. S. (Mason)	4641	Nov. 30	Sewing-machine embroidery attachment.
Juvinal, J. M., & Grivot, P. A. (Brewer)	61	Jan. 6	Floating and submerged ships and propelling [same]

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K.			
Kaberry, L., & Houghton, T.	3206	May 25	Spinning and doubling fibres.
" L., & Lord, W.	3342	Aug. 25	Cleaning cotton.
Kalbfleisch, F. W., & Sheffield, G. V.	5058	Dec. 30	Uniting boot soles, leather, cloth, &c.
Kalbfleisch, F. W., Sheffield, G. V., & Fanning, J. (Morgan).	3722	July 1	Boots and shoes; uniting leather, &c.
" F. W., Fanning, J., & Sheffield, G. V. (Morgan).	3437	Aug. 31	Sewing-machines for leather, &c.
Kallab, F. V. (Wirth)	3896	Oct. 9	Bleaching animal fibre.
Kamienaki, M. (Pitt)	3169	Aug. 10	Treating ores of copper, &c. for metals or salts.
Kamm Co., Hannover Gummi (Wirth)	973	Mar. 6	Bobbins.
Kasolowsky, E. (Alexander)	609	Feb. 15	Dredging-machinery.
Kaufmann, A. F.	210	Jan. 19	Starting cars and vehicles.
Kay, J.	4872	Dec. 16	Drawing-board.
" T.	1399	Mar. 31	Money-tills.
Kaye, W.	941	Mar. 4	Steam-engines.
Kayser, A. & N., & Helwig, J. B.	3729	Sep. 23	Steam-gauge and safety-valve.
" N. & A., & Helwig, J. B.	3729	Sep. 23	Steam-gauge and safety-valve.
Keats, J., & Greenwood, A.	3455	Sep. 1	Boots and shoes and sewing same.
" J., Neil, J., & Batley, J.	4076	Oct. 21	Boots and shoes and lasting, &c. same.
Keddy, T.	2	Jan. 1	Cutting straw, hay, &c.
Keel, G.	1147	Mar. 16	Roller skates.
" G., & Pringle, W.	1562	Apr. 13	Roller skates.
Keene, S. D.	3553	Sep. 11	Cotton openers and cleaners.
Keey, W. H.	3434	Aug. 31	Fastenings for boots, shoes, &c.
Kehoe, J., Shanley, T. J., & Drinen, G. C.	2260	May 29	Beer taps.
Keighley, E.	1422	Apr. 3	Singeing fabrics and fibres.
" E., & Ramsden, J. C.	2281	May 30	Combustion of fuel,
" J.	3677	Sep. 20	Fog signalling on railways and tramways.
Keim, J.	2956	July 20	Stretching and drying fabrics.
Kelen, L. van der	4563	Nov. 25	Gas-stoves.
Kelly, E. F.	4056	Oct. 20	Portable folding musical instrument.
" H. W., & Wright, R. L.	5010	Dec. 28	Spinning tobacco.
" P.	3469	Sep. 2	Combing fibres.
" S. J. J.	2490	June 15	Producing letters, &c. on glass.
Kelly, W. E. (Lake)	2731	July 3	Harvesting-machines.
Kelman, J. A., & Wilson, J.	3495	Sep. 5	Cleaning tramway rails.
Kelway, C. E.	1455	Apr. 5	Ascertaining rate of vessels, &c.
Kemp, J.	2234	May 27	Screening gravel, coals, &c.
" R.	3970	Oct. 13	Microscopes.
Kemsley, W.	2567	June 23	Protecting bricks in drying.
Kendal, G.	984	Mar. 7	Bottle-stoppers.
Kendall, H. J. B.	2443	June 13	Attaching braces to trousers.
" W.	837	Feb. 29	Screwing-machines.
" W. J., & Whiteley, J.	4496	Nov. 21	Roller skates.
Kennedy, De- L., Delamater, C. H., & Robinson, G. H. (Lake).	3207	Aug. 14	Punch or projectile.
Kennedy, M., & Eastwood, J.	2233	May 27	Rock-drilling machinery.
" T.	5013	Dec. 28	Water-meters.
" T. S.	399	Jan. 31	Drilling-machines.
Kent, A.	2567	June 21	Tooth-brushes.
" G.	4804	Dec. 12	Cutting or mincing and other machines.
" G.	4837	Dec. 14	Knife-cleaning machines.
Kenyon, Hartley	1176	Mar. 18	Oxide and chloride of zinc.
" Henry, & Heron, M.	1628	Apr. 18	Blast furnaces.
" J. & J. H.	1332	Mar. 29	Extinguishing fire.

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Kenyon, J. & J. H. - - - - -	2612	June 24	Carding-engines.
" J. H. & J. - - - - -	1332	Mar. 29	Extinguishing fire.
" J. H. & J. - - - - -	2612	June 24	Carding-engines.
" W. - - - - -	270	Jan. 24	Signalling on railways.
Kernahan, T. - - - - -	4411	Nov. 14	Lozenges and making same.
Kernaui, M. H. - - - - -	2665	June 28	Couplings for driving shafts.
Kerr, E. R. (Wormald) - - - - -	4484	Nov. 20	Storing & supplying fuel to railway tenders.
Kerr, H. - - - - -	580	Feb. 12	Envelopes.
" J. D. - - - - -	1686	Apr. 21	Hatchways for vessels.
Kershaw, Jabez - - - - -	451	Feb. 4	Loom shuttles.
" Jesse - - - - -	2036	May 15	Pickers.
" John - - - - -	3324	Aug. 24	Stretching and tenting cloths.
" P. - - - - -	541	Feb. 10	Stopping trains or carriages.
" W. H. - - - - -	4652	Dec. 1	Roofs and other structures.
Kessler, C. - - - - -	4437	Nov. 16	Safety-wheel for railway carriages, &c.
Kessler, H. (Johnson) - - - - -	107	Jan. 10	Joints for pipes or hose.
Kesterton, H. - - - - -	1724	Apr. 24	Roller skates.
Ketley, J., & Moss, G. - - - - -	2659	June 28	Sewing-machines and shuttles for same.
Keymer, H. J. O. - - - - -	4858	Dec. 15	Paper-boxes and similar articles.
Keyworth, G. A. - - - - -	1343	Mar. 29	Paper for disinfecting, &c.
Kidd, James & J. - - - - -	4559	Nov. 24	Making and carburetting gas.
" John H. - - - - -	207	Jan. 19	Treating excreta, &c. for manure.
" Joshua - - - - -	675	Feb. 18	Gas-making.
" Joshua - - - - -	1034	Mar. 10	Gas-producing furnaces.
" Joshua & J. - - - - -	4559	Nov. 24	Making and carburetting gas.
Kieffer, F. A. - - - - -	4236	Nov. 2	Making paper-pulp and cardboard.
Kierzkowski, C. F. de, - - - - -	3191	Aug. 12	Pressure generators; propelling tram-cars.
Kilbee, W. - - - - -	429	Feb. 3	Fire-arms.
Kilburn, R. - - - - -	3591	Sep. 13	Washing and scouring machines.
Killiches, H. - - - - -	2668	June 28	Dynamometers.
Kilner, W. J. - - - - -	802	Feb. 26	Producing continuous electric currents.
Kimberley, N. G. - - - - -	4463	Nov. 18	Crushing, grinding, mixing, &c. machines.
" N. G. - - - - -	4671	Dec. 2	Springs for railway and other purposes.
" N. G. - - - - -	4677	Dec. 4	Cutting mouldings in stone or wood.
Kincaid, J. - - - - -	64	Jan. 6	Permanent way, &c. of tramways.
Kinder, J. de, & Latour, F. C. - - - - -	565	Feb. 11	Steeping, bleaching, separating, &c. fibr [treating textile fabr
King, E. - - - - -	781	Feb. 24	Treating seed, corn, &c.; dressings for sus
" G. - - - - -	597	Feb. 14	Making cut-nails and tacks.
" H. J. H., & Bomford, E. G. C. - - - - -	1112	Mar. 15	Reaping and binding crops.
" J. T. (Padder & Abel) - - - - -	1056	Mar. 11	Table cutlery.
" J. T. (Oliver) - - - - -	3772	Sep. 28	Tie-buckles.
" J. T. (Hobbs) - - - - -	4087	Oct. 23	Chandeliers, brackets, and bracket-arms.
King, T., Bryant, C. B., & Young, H. [(Lake)	4239	Nov. 2	Smoke-consuming furnaces.
King, W. - - - - -	1531	Apr. 11	Mortising-machines.
King, W. F., & Jamieson, A. - - - - -	4167	Oct. 27	Grappels for submarine cables.
Kingdom, H. W. A., Howard, J., & [Wilson, A. F.	4014	Oct. 18	Controlling flow of and preventing waste [water, &
Kingsford, C. - - - - -	495	Feb. 8	Artificial fuel blocks.
Kingston, F. - - - - -	3070	July 31	Cutting and bundling fire-wood.
Kingzett, C. T., & Zingler, M. - - - - -	274	Jan. 24	Antiseptics and disinfectants.
" C. T., & Zingler, M. - - - - -	2630	June 26	Blood-albumen and applying same.
Kinnipple, W. R. - - - - -	768	Feb. 24	Dredgers.
Kinmond, J. C. - - - - -	4214	Oct. 31	Rolling tea-leaves.
Kintzinger, A., & Holthausen, F. (Clark)	2213	May 25	Castors; roller skates.
Kips, L. (Thompson) - - - - -	2184	May 24	Portable cartouch for dressing wounds.
Kirby, J. R. - - - - -	2970	July 21	Reaping and mowing machines.
Kirk, A. C. - - - - -	3246	Aug. 18	Steam-engines for war-ships.
" J. W. - - - - -	2364	June 6	Forming glass bottles.
" P. - - - - -	470	Feb. 5	Rolling mills.
Kirkham, G. B. (Brewer) - - - - -	1712	Apr. 22	Umbrellas and parasols.
Kirkpatrick, R. S. (Murdoch) - - - - -	3589	Sep. 8	Sugar-making.

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<i>Kirtland, C. E. (Clark)</i> - - - - -	752	Feb. 23	Casting the lead on board ship.
<i>Kirton, R. G.</i> - - - - -	4361	Nov. 11	Churning-machines.
<i>Kislingbury, S., & Bigg, H. H.</i> - - -	1744	Apr. 25	Roller skates.
<i>Kitchin, M.</i> - - - - -	3005	July 25	'Stocks' used in making leather.
<i>Kite, J. & J.</i> - - - - -	449	Feb. 4	Roller skate.
<i>Kitson, A., & Naylor, J.</i> - - - - -	4581	Nov. 27	Railway couplings.
<i>Kitson, R. (Lake)</i> - - - - -	3032	July 27	Opening, breaking, &c. fibres.
<i>Kitson, W. H.</i> - - - - -	399	Feb. 1	Railway wheels.
<i>Klein, P. L. (Pieper)</i> - - - - -	1836	May 2	Carding fibres.
<i>Kleinau, A. W. O. (Pieper)</i> - - - - -	4903	Dec. 19	Locks.
<i>Klinkerfues, W. (Wise)</i> - - - - -	2658	June 28	Telescope for measuring distances.
<i>Kluge, J., & Bernmueller, J. (Lake)</i> -	3668	Sep. 19	Combining confectionery with musical instru- [ments.]
<i>Klüh, S.</i> - - - - -	5033	Dec. 29	Tiles and panelling for walls, ceilings, &c.
<i>Knab, C. (Clark)</i> - - - - -	1930	May 8	Treating sewage water.
<i>Knee, P. (Oliver)</i> - - - - -	1567	Apr. 13	Disinfectants; treating fibrous materials to [prevent decay, &c.]
<i>Knight, Farinaus, & Dutemple (Browne)</i>	2241	May 27	Stone-breaking machine.
<i>Knight, E. H. (Lake)</i> - - - - -	2550	June 20	Wrenches or spanners.
<i>Knight, E. M.</i> - - - - -	1270	Mar. 24	Bottles and stoppers.
<i>" E. M.</i> - - - - -	1674	Apr. 21	Washing-machines.
<i>" H.</i> - - - - -	81	Jan. 7	Pigments and making same.
<i>" J. H.</i> - - - - -	4942	Dec. 21	Steam-digging machines.
<i>" J. W.</i> - - - - -	3245	Aug. 18	Shirt-front and vest.
<i>" T. G.</i> - - - - -	4856	Dec. 15	Milling stocks for felting hat bodies, &c.
<i>Knott, G. S.</i> - - - - -	766	Feb. 24	Clearing and carting mud.
<i>" H., & Massey, G.</i> - - - - -	2162	May 22	Taps for steam and liquids.
<i>" K.</i> - - - - -	1920	May 8	Preserving meat.
<i>" K.</i> - - - - -	2064	May 16	Preserving animal, &c. substances.
<i>" K.</i> - - - - -	4446	Nov. 17	Preserving animal, &c. substances.
<i>" R.</i> - - - - -	3887	Oct. 7	Cleaning knives.
<i>" S.</i> - - - - -	2984	July 24	Substitutes for umbrellae.
<i>Knowles, G.</i> - - - - -	1410	Apr. 1	Mules.
<i>" S.</i> - - - - -	4321	Nov. 8	Conditioning and ageing printed fabrics.
<i>" W., Murdoch, W., & Ault,</i> <i>[H. H.]</i>	330	Jan. 27	Anti-incrustation composition.
<i>Knox, E. B. J.</i> - - - - -	652	Feb. 17	Roller skates.
<i>" E. E.</i> - - - - -	2623	June 24	Knife or opener for food tins.
<i>Kohrig, R., & Pzillas, R. (Martineau)</i>	2169	May 22	Cutting sugar.
<i>" R., & Pzillas, R. (Martineau)</i>	3267	Aug. 19	Cutting and packing sugar.
<i>Koll, B. S. (Morgan-Brown)</i> - - - -	3305	Aug. 23	Steam-boilers.
<i>Körting, E.</i> - - - - -	1117	Mar. 15	Forcing and raising liquids.
<i>Körting, E. (von Nawrocki)</i> - - - -	4420	Nov. 15	Sugar-making.
<i>Köttgen, F. W.</i> - - - - -	499	Feb. 8	Pumping-engine.
<i>Krafft, L., & Julien-Sauve, H.</i> - - -	4976	Dec. 23	Treating iron, Bessemer, Martin, and other [metals for forming into steel.]
<i>Kramme, C. D. E.</i> - - - - -	2476	June 15	Suspending gasaliers, lamps, &c.
<i>Krebs, P. C. (Clark)</i> - - - - -	3801	Sep. 29	Screw-threading bottles, &c.; caps for same.
<i>Kritch, W. C., & Greenwood, A.</i> - -	4549	Nov. 23	Printing-machinery.
<i>Krocker, B.</i> - - - - -	576	Feb. 12	Equilibrium valves.
<i>Krüger, S. D.</i> - - - - -	2180	May 23	Exhibiting and advertising apparatus.
<i>Kullrich, F. F. (Jensen)</i> - - - - -	2837	July 12	Photographic albums.
<i>Kunkel, J. B.</i> - - - - -	4999	Dec. 27	Eliminating phosphorus from iron.
<i>Kunkler, E.</i> - - - - -	656	Feb. 17	Varnishes for wood, iron, &c.
<i>Kunkler, E. (Morgan-Brown)</i> - - - -	3243	Aug. 17	Varnishes, and applying same.
<i>Kunstädter, J. J.</i> - - - - -	2130	May 19	Roller skates.
<i>Kuntze, J.</i> - - - - -	3514	Sep. 6	Brakes.
<i>Kunz, Birnbacher & Co., & Thouvenin, L.</i> <i>[(Michaelson).]</i>	994	Mar. 8	Artificial grinding stone.
<i>Kurtz, A. E. (Clark)</i> - - - - -	4990	Dec. 23	Operating railway brakes, &c.
<i>Kusler, H. (Lake)</i> - - - - -	725	Feb. 22	Making screw-nuts.
<i>" H. (Lake)</i> - - - - -	8952	Oct. 5	Making screw-nuts.

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L.			
<i>Labarthe, B., Guillemare, A., & Pallas, L.</i> [Newton].	4369	Nov. 11	Lamps.
<i>La Bastie, F. B. A. Royer, de (Abel) -</i>	1908	May 6	Tempering glass bottles, &c.
<i>La Bonnière, E. H. de Vicomte de</i> [Beaumont (Johnson)].	3451	Sep. 1	Vaults or arches and ventilating, &c. same.
<i>Lace, J. - - - - -</i>	4527	Nov. 22	Valves of bilge and other pumps.
<i>Lacomme, J. M. A., & Marville, L. J. C.</i> [Tongue].	3158	Aug. 9	Seats, benches, &c. for advertising.
<i>La Cour, P. (Jensen) - - - - -</i>	843	Feb. 29	Telegraphy.
<i>Lacy, H. - - - - -</i>	1357	Mar. 30	Ventilating; curing smoky chimneys.
<i>Lafourcade, W. R., & Lambeth, S. W.</i> [Lake].	3685	Sep. 20	Fans for protecting food from insects.
<i>Lagillardaie, E. de (Abel) - - - - -</i>	3839	Oct. 4	Inkstands.
<i>Lahaire, J. (Gedge) - - - - -</i>	1447	Apr. 5	Steam-boiler fire-places.
<i>Laidlaw, D. - - - - -</i>	426	Feb. 2	Lighting railway carriages, ships, buildings, &
<i>" D. - - - - -</i>	1631	Apr. 19	Lighting railway carriages, ships, buildings, &
<i>Laing, W. - - - - -</i>	4980	Dec. 23	Soft-soap.
<i>Lake, Mary A., & Hazeltine, M. W.</i> [Clark].	4126	Oct. 24	Spray producers for decomposing water.
<i>Lake, W. R. (Folk) - - - - -</i>	37	Jan. 4	Sewing-machines.
<i>" W. R. (Stephens) - - - - -</i>	38	Jan. 4	Eye-cups.
<i>" W. R. (Draper & Groot) - - - - -</i>	108	Jan. 10	Lubricating compounds.
<i>" W. R. (Bale) - - - - -</i>	109	Jan. 10	Refrigerating-apparatus.
<i>" W. R. (Sheldon) - - - - -</i>	134	Jan. 12	Screwing-machinery.
<i>" W. R. (Haskell) - - - - -</i>	251	Jan. 21	Injectors.
<i>" W. R. (Gill) - - - - -</i>	262	Jan. 22	Making gas and applying same.
<i>" W. R. (Zarin) - - - - -</i>	298	Jan. 25	Making bread.
<i>" W. R. (Sangster & Grosvenor) - - - - -</i>	299	Jan. 25	Electro-magnetic regulators.
<i>" W. R. (Zarin) - - - - -</i>	301	Jan. 25	Preparing distillery mash.
<i>" W. R. (Brot) - - - - -</i>	348	Jan. 28	Mirrors or looking-glasses.
<i>" W. R. (Sloan) - - - - -</i>	385	Jan. 31	Screws and screw-drivers; making screws.
<i>" W. R. (Burbank) - - - - -</i>	419	Feb. 2	Lamps.
<i>" W. R. (Count de Douhet) - - - - -</i>	428	Feb. 2	Making steel.
<i>" W. R. (Tavis) - - - - -</i>	441	Feb. 3	Horse-shoes.
<i>" W. R. (Boarhman) - - - - -</i>	445	Feb. 3	Revolving pistols.
<i>" W. R. (Quarante) - - - - -</i>	461	Feb. 4	Hygienic candles and lamps.
<i>" W. R. (Watkins) - - - - -</i>	505	Feb. 8	Fire and burglar alarm signals.
<i>" W. R. (Seibert) - - - - -</i>	506	Feb. 8	Steam-engine lubricators.
<i>" W. R. (Truue) - - - - -</i>	224	Feb. 9	Galvanic-batteries.
<i>" W. R. (Struhar) - - - - -</i>	548	Feb. 10	Neck-ties.
<i>" W. R. (Stewart) - - - - -</i>	561	Feb. 11	Rotary-engines.
<i>" W. R. (Bull) - - - - -</i>	582	Feb. 12	Loading, &c. ordnance; cartridges.
<i>" W. R. (St. John & Groesbeck) - - - - -</i>	539	Feb. 12	Ventilating railway carriages, houses, &c.
<i>" W. R. (Beut) - - - - -</i>	642	Feb. 16	Mariners' compasses.
<i>" W. R. (Greenwood & Clarke) - - - - -</i>	667	Feb. 17	Making horse-shoes.
<i>" W. R. (Kusler) - - - - -</i>	725	Feb. 22	Making screw-nuts.
<i>" W. R. (Redfield & Bowen) - - - - -</i>	726	Feb. 22	Ore-separators.
<i>" W. R. (Ferguson) - - - - -</i>	727	Feb. 22	Glove-fastening.
<i>" W. R. (Stover) - - - - -</i>	760	Feb. 23	Cutting precious stones.
<i>" W. R. (Godfrey) - - - - -</i>	761	Feb. 23	Lighting houses, ships, &c.
<i>" W. R. (Jaeger) - - - - -</i>	777	Feb. 24	Lining and drying pasteboard for sizing, & [materials; adhesive compound]
<i>" W. R. (Sangster, Clay, Van</i> <i>Vleck, & Jawley).</i>	857	Feb. 29	Fare-registers for tram-cars, &c.
<i>" W. R. (Gardner) - - - - -</i>	881	Mar. 1	Machine-guns.
<i>" W. R. (Bigler, M'Pherson, &</i> <i>[Gilbert].)</i>	883	Mar. 1	Brick-making.
<i>" W. R. (American Cable Screw</i> <i>[Wire Co.])</i>	920	Mar. 3	Uniting boot-nippers, hose-tube seams, &c.
<i>" W. R. (Redfield) - - - - -</i>	947	Mar. 4	Brick-kilns.

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Lake, W. R. (Williams) - - - -	966	Mar. 6	Railway-switches.
„ W. R. (Royer) - - - - -	977	Mar. 6	Converting hides into leather.
„ W. R. (Deans) - - - - -	983	Mar. 7	Gasaliers.
„ W. R. (Feukes) - - - - -	987	Mar. 7	Miners' picks.
„ W. R. (Motte) - - - - -	988	Mar. 7	Crushing-machine.
„ W. R. (Richardson) - - - -	991	Mar. 7	Scouring, polishing, &c. wheat.
„ W. R. (Penley, Dorman, & [Dorman]) - - - - -	1010	Mar. 8	Making veneers.
„ W. R. (Hollub) - - - - -	1053	Mar. 10	Sewing-machines.
„ W. R. (Appleton) - - - - -	1079	Mar. 11	Knitting-machinery.
„ W. R. (Murphy) - - - - -	1080	Mar. 11	Ventilating mines.
„ W. R. (Noble & Prosser) - -	1105	Mar. 14	Pegging boots, &c.; wire pegs.
„ W. R. (Wallerstein & Meyer) -	1140	Mar. 16	Fastenings for wearing-apparel.
„ W. R. (Garnier) - - - - -	1194	Mar. 20	Nickel and its alloys.
„ W. R. (Mennessier) - - - -	1210	Mar. 21	Puddling-furnace.
„ W. R. (Carpenter) - - - - -	1226	Mar. 22	Sewing-machines.
„ W. R. (Montmagnon) - - - -	1256	Mar. 24	Combustible compounds, &c. for producing gas.
„ W. R. (Pratt & Reynolds) - -	1274	Mar. 24	Varnishing cartridge shells.
„ W. R. (Sawyer) - - - - -	1437	Apr. 4	Observatory or look-out towers.
„ W. R. (Steinmig) - - - - -	1454	Apr. 5	Crushing, &c. grain and minerals.
„ W. R. (St. John) - - - - -	1466	Apr. 6	Making, &c. combustible gases.
„ W. R. (Linton) - - - - -	1497	Apr. 8	Pyrotechnic signals.
„ W. R. (Winord) - - - - -	1521	Apr. 10	Tube-expander.
„ W. R. (Delebécque & Banderudi) -	1524	Apr. 10	Stopping railway trains.
„ W. R. (Moore) - - - - -	1535	Apr. 11	Spittoons or cuspadores.
„ W. R. (Jaget) - - - - -	1537	Apr. 11	Anvils for cartridges.
„ W. R. (Wickes) - - - - -	1546	Apr. 11	Refrigerating apparatus for provision carriages.
„ W. R. (Johnston) - - - - -	1555	Apr. 12	Binding wheat-sheaves, &c.
„ W. R. (Fuller & Crandall) - -	1557	Apr. 12	Magneto-electric machines.
„ W. B. (Winner) - - - - -	1559	Apr. 12	Preventing fraud by stamps, &c.
„ W. R. (Thilmann) - - - - -	1560	Apr. 12	Treating textile materials, &c. to prevent decay.
„ W. R. (Scafield) - - - - -	1561	Apr. 12	Straightening shafting tubes, rails, &c.
„ W. R. (Armstrong) - - - - -	1577	Apr. 13	Braces or suspenders, straps, &c.
„ W. R. (Fletcher) - - - - -	1578	Apr. 13	Postal and other stamps.
„ W. R. (Ibbotson) - - - - -	1607	Apr. 15	Railway couplings and buffers.
„ W. R. (Steine) - - - - -	1609	Apr. 17	Making iron and steel.
„ W. R. (Simonds) - - - - -	1639	Apr. 19	Conveyers for grain, &c.
„ W. R. (Rogers) - - - - -	1640	Apr. 19	Brushes for cleaning tubes.
„ W. R. (Bailey) - - - - -	1703	Apr. 21	Machine-guns.
„ W. R. (Scott) - - - - -	1719	Apr. 22	Cutting and folding paper.
„ W. R. (Appleton) - - - - -	1749	Apr. 26	Embroidery knitting.
„ W. R. (Leland) - - - - -	1762	Apr. 26	Screws and screw-drivers.
„ W. R. (Newton) - - - - -	1814	Apr. 29	Dredging by hydraulic power.
„ W. R. (Johnston) - - - - -	1823	May 1	Harvesting-machines.
„ W. R. (Fisfield) - - - - -	1853	May 2	Condensing exhaust steam.
„ W. R. (Holmes) - - - - -	1895	May 5	Atomisers for perfumes.
„ W. R. (Rogers) - - - - -	1905	May 5	Making wood-screws.
„ W. R. (Wiard) - - - - -	1929	May 8	Projectiles for ordnance.
„ W. R. (Vanhorn & Cranston) -	2020	May 13	Paper-cutting machine.
„ W. R. (Wright & Schnoble) - -	2021	May 13	Packing for piston-rods.
„ W. R. (Wiggin) - - - - -	2103	May 18	Boiler-flue cleaners.
„ W. R. (Rogers) - - - - -	2129	May 19	Shaving, pointing, &c. wood-screws.
„ W. R. (Saunders) - - - - -	2207	May 25	Cutting pipes.
„ W. R. (Johnson & Bye) - - -	2257	May 29	Air-pistols and guns.
„ W. R. (Hance & Hornum) - - -	2321	June 1	Registering railway fares, &c.
„ W. R. (Sloan) - - - - -	2331	June 2	Making wood-screws.
„ W. B. (Cunningham) - - - -	2345	June 3	Bomb-lances.
„ W. B. (Butterfield) - - - -	2382	June 7	Atmospheric-hammers.
„ W. R. (Sangster & Grosvenor) -	2423	June 12	Marine-engine governors.
„ W. R. (Niedringhaus & Niedringhaus) - - - - -	2453	June 14	Enamelling iron.
„ W. R. (Heyl) - - - - -	2499	June 16	Sewing or binding books with wire staples and [forming same.]

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Lake, W. R. (<i>Grasser</i>) - - - - -	2500	June 16	Producing moulds in wax, &c.
" W. R. (<i>Comly</i>) - - - - -	2532	June 19	Gear-wheels.
" W. R. (<i>Spencer & Pingree</i>) - -	2543	June 19	Knitting-loom.
" W. R. (<i>Knight</i>) - - - - -	2550	June 20	Wrenches or spanners.
" W. R. (<i>Evans</i>) - - - - -	2561	June 21	Indicating stations in railway carriages, &c.
" W. R. (<i>Leland</i>) - - - - -	2637	June 26	Couplings for pipes, faucets, &c.
" W. R. (<i>Appleton</i>) - - - - -	2657	June 27	Seaming, &c. knitted or other fabrics.
" W. R. (<i>Ryerson</i>) - - - - -	2669	June 28	Reducing cereals, &c. to flour.
" W. R. (<i>Ballou</i>) - - - - -	2670	June 28	Sewing-machines.
" W. R. (<i>Chapin & Gilbert</i>) - -	2672	June 28	Lamps and lamp-burners.
" W. R. (<i>Kelly</i>) - - - - -	2731	July 3	Harvesting-machines.
" W. R. (<i>Schlenker</i>) - - - - -	2734	July 4	Paper-cutting machinery.
" W. R. (<i>Thompson</i>) - - - - -	2735	July 4	Lowering ships' boats.
" W. R. (<i>Herrenschmidt</i>) - - -	2736	July 4	Furnaces for roasting.
" W. R. (<i>Ewart</i>) - - - - -	2752	July 5	Driving chains for machinery.
" W. R. (<i>Jones</i>) - - - - -	2777	July 7	Revolving cylinder pistols.
" W. R. (<i>Johnston</i>) - - - - -	2795	July 8	Reaping-machines.
" W. R. (<i>Amicus Brothers</i>) - -	2911	July 15	Preserved food boxes or cases.
" W. R. (<i>Byrne</i>) - - - - -	2938	July 18	Galvanic-batteries.
" W. R. (<i>Remington & Sons</i>) - -	2959	July 20	Securing and removing caps, &c. in cartridges.
" W. R. (<i>Clark</i>) - - - - -	2978	July 22	Rollers for wringing-machines, &c.
" W. R. (<i>Folk</i>) - - - - -	3002	July 25	Lanterns and candlesticks.
" W. R. (<i>Kitson</i>) - - - - -	3032	July 27	Opening, breaking, &c. fibres.
" W. R. (<i>Edwards</i>) - - - - -	3045	July 28	Oil-burning stoves.
" W. R. (<i>Simon</i>) - - - - -	3064	July 31	Removing hair, &c. from, and preserving skins.
" W. R. (<i>Tenney & Hobbs</i>) - -	3088	Aug. 2	Children's carriages, chairs and tables.
" W. R. (<i>Kennedy Delamater & Robinson</i>) -	3207	Aug. 14	Punch or projectile.
" W. R. (<i>Gilzinger</i>) - - - - -	3265	Aug. 19	Velocipedes.
" W. R. (<i>Todd</i>) - - - - -	3293	Aug. 22	Preventing smoke from furnaces.
" W. R. (<i>Gardner</i>) - - - - -	3294	Aug. 22	Sewing leather, &c. for making harness and [boots and shoes.]
" W. R. (<i>McKay</i>) - - - - -	3349	Aug. 25	Boot and shoe sewing-machines.
" W. R. (<i>Small</i>) - - - - -	3391	Aug. 28	Alarm-punch and register for conductors of [omnibuses, &c.]
" W. R. (<i>Corron</i>) - - - - -	3476	Sep. 2	Dressing, &c. skeins or hanks of silk, &c.
" W. R. (<i>Schierloh</i>) - - - - -	3482	Sep. 4	Making steel.
" W. R. (<i>Truchot</i>) - - - - -	3513	Sep. 6	An improved shawl.
" W. R. (<i>Stebins & Howard</i>) - -	3544	Sep. 9	Hydraulic elevating machinery.
" W. R. (<i>Heckert</i>) - - - - -	3604	Sep. 14	Printing, paper-cutting and tag-making.
" W. R. (<i>von Swaine</i>) - - - - -	3613	Sep. 15	Elevating-machinery.
" W. R. (<i>Pray, Johnson, Pray & Beers</i>) -	3652	Sep. 18	Axles and axle-boxes.
" W. R. (<i>Kluge & Bermueller</i>) -	3668	Sep. 19	Combining confectionery with musical instruments.
" W. R. (<i>Lambeth & Lafourcade</i>) -	3685	Sep. 20	Fans for protecting food from insects.
" W. R. (<i>Carrozzini</i>) - - - - -	3739	Sep. 25	Apparatus to assist in learning singing.
" W. R. (<i>Folk</i>) - - - - -	3742	Sep. 25	Sewing-machinery.
" W. R. (<i>Robertson</i>) - - - - -	3821	Oct. 2	Saws for cutting stone; securing diamond [points or teeth.]
" W. R. (<i>Drake & Wright</i>) - - -	3842	Oct. 4	Uniting leather, &c.; sewing boots, harness, &c.
" W. R. (<i>Kusler</i>) - - - - -	3852	Oct. 5	Making screw-nuts.
" W. R. (<i>Copeland</i>) - - - - -	3892	Oct. 7	Lasting boots and shoes.
" W. R. (<i>Howes, Babcock & Co.</i>) -	3901	Oct. 9	Separating grain from dust, &c.
" W. R. (<i>Jewett & Root</i>) - - -	3984	Oct. 14	Stoves.
" W. R. (<i>American Screw Co.</i>) -	3998	Oct. 16	Shaving and nicking screws.
" W. R. (<i>Headley</i>) - - - - -	4029	Oct. 18	Fire-arms.
" W. R. (<i>Smith & Bowman</i>) - -	4043	Oct. 19	Catching fish or game.
" W. R. (<i>Crim</i>) - - - - -	4044	Oct. 19	Street pavement.
" W. R. (<i>McCormick</i>) - - - - -	4065	Oct. 21	Harvesting-machines.
" W. R. (<i>McCormick</i>) - - - - -	4066	Oct. 21	Harvesting-machines.
" W. R. (<i>Blake</i>) - - - - -	4082	Oct. 21	Pasting, cutting, &c. edges of shoe vamps.
" W. R. (<i>McCormick</i>) - - - - -	4100	Oct. 23	Harvesting-machines.

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Lake, W. R. (<i>Gueltcher</i>) - - - -	4154	Oct. 26	Looms.
" W. R. (<i>Bierce</i>) - - - -	4157	Oct. 26	Postage and similar stamps.
" W. R. (<i>Stanley & Harris</i>) - -	4198	Oct. 30	Making paper bags.
" W. R. (<i>Thomson</i>) - - - -	4211	Oct. 31	Raising heavy weights.
" W. R. (<i>De Hennault Bros. & [Guinotte]</i>) - - - -	4221	Nov. 1	Pressure-indicator.
" W. R. (<i>Root</i>) - - - -	4234	Nov. 1	Making metal pipes or tubes.
" W. R. (<i>Root</i>) - - - -	4238	Nov. 2	Making metal pipes or tubes.
" W. R. (<i>Bryant, Young, & King</i>) -	4239	Nov. 2	Smoke consuming furnaces.
" W. R. (<i>Root</i>) - - - -	4241	Nov. 2	Making metal tubes.
" W. R. (<i>Tyler</i>) - - - -	4242	Nov. 2	Extracting corks from bottles.
" W. R. (<i>Hayden</i>) - - - -	4259	Nov. 3	Bale-ties and bale hoop iron.
" W. R. (<i>Bollmann</i>) - - - -	4270	Nov. 4	Cutting screws or other articles.
" W. R. (<i>Shepherd & Seaman</i>) -	4290	Nov. 6	Shovels.
" W. R. (<i>Wheeler</i>) - - - -	4292	Nov. 6	Preparing wood for varnishing, &c.
" W. R. (<i>Beecher</i>) - - - -	4293	Nov. 6	Framing match-splints for dipping.
" W. R. (<i>Gould</i>) - - - -	4306	Nov. 13	Feed-apparatus for nail-machines.
" W. R. (<i>Brayton</i>) - - - -	4422	Nov. 15	Pistons of air and gas engines.
" W. R. (<i>La Serve</i>) - - - -	4494	Nov. 20	Lace machines for making woven fabrics, &c.
" W. R. (<i>Garnier</i>) - - - -	4577	Nov. 25	Waterproofing, &c. threads and fabrics.
" W. R. (<i>Richardson</i>) - - - -	4588	Nov. 27	Couplings for pipes or tubes.
" W. R. (<i>Root</i>) - - - -	4589	Nov. 27	Railway carriages and brakes.
" W. R. (<i>Egger</i>) - - - -	4595	Nov. 28	Electro-magnetic engines.
" W. R. (<i>Larrabee</i>) - - - -	4622	Nov. 29	Unhairing, scouring, &c. hides and skins.
" W. R. (<i>Brandt</i>) - - - -	4682	Dec. 4	Boring or working rock or other material.
" W. R. (<i>Locke & Locke</i>) - - -	4699	Dec. 5	Valves for steam or other fluids.
" W. R. (<i>Valentine & Morrison</i>) -	4719	Dec. 6	Umbrellas, parasols, sunshades, &c.
" W. R. (<i>Essex</i>) - - - -	4748	Dec. 7	Spindles and bobbins.
" W. R. (<i>Thomasset & Driot</i>) - -	4750	Dec. 8	Testing resistance of materials to tension, &c.
" W. R. (<i>Linsley</i>) - - - -	4775	Dec. 9	Ventilating, warming, and cooling buildings.
" W. R. (<i>Walsh</i>) - - - -	4789	Dec. 11	Stowage of cotton, &c. in vessels & removing same.
" W. R. (<i>Foust & Stratton</i>) - -	4800	Dec. 12	Loading waggons with hay, &c.
" W. R. (<i>American Screw Co.</i>) -	4891	Dec. 18	Screw-making machinery.
" W. R. (<i>American Tube Works</i>) -	4938	Dec. 21	Hollow metal rolls and tubes.
" W. R. (<i>Fritsch & Forster</i>) - -	4955	Dec. 22	Telescope.
" W. R. (<i>Boomer & Randall</i>) - -	4995	Dec. 26	Malt syrup or extract.
" W. R. (<i>Watkins & Brown</i>) - -	5002	Dec. 27	Engraving, &c. jewellers' and silversmiths' work.
" W. R. (<i>Dussaul & Testacuzzi</i>) -	5019	Dec. 28	Umbrellas.
Lamb, J. M. - - - -	800	Feb. 26	Self-securing skates.
Lambert, L. Cullen, & Leullier (Thomp- [son]).	863	Feb. 17	Indicating, &c. steam-pressure.
Lambeth, S. W., & Lafourcade, W. R. [(Lake)].	3685	Sep. 20	Fans for protecting food from insects.
Lamboi, G. J. P., & Vandesmet, A. [(Newton)].	1541	Apr. 11	Revivifying charcoal.
Lampitt, C., & Thompson, R. W. -	2818	July 11	Dressing flour, purifying middlings, &c.
Lancaster, R., & Swindells, I. - -	908	Mar. 3	Removing incrustation from steam-boilers, &c.
" R., & Swindells, I. - -	2563	June 21	Obtaining chemical products from air, &c.
" R., & Swindells, I. - -	3148	Aug. 9	Manufacture of ammonia.
" W., Pilkington, J. H., & [Peel, W.].	3716	Sep. 22	Looms.
Landau, M. I. - - - -	80	Jan. 7	Heating, ventilating, lighting, and cooking.
Landerberger, C. H. (Johnson) - -	3835	Oct. 4	Knitted fabrics and producing same.
Lane, S. - - - -	4309	Nov. 7	Oil and spirit lamps and cans.
" T. - - - -	1419	Apr. 1	Fuel.
" T. - - - -	1880	May 5	Fire-place.
" T. - - - -	3893	Oct. 7	Furnaces and fire-places for saving fuel, &c.
Lauey, G. L. de (Morgan-Brown) -	1187	Mar. 16	Sewing-machines.
Lanfear, W. - - - -	4783	Dec. 11	Band saws.
Lang, J. - - - -	3340	Aug. 25	Toilet mirror.
" W. - - - -	4637	Nov. 30	Red lead furnaces.
Lange, C. - - - -	904	Mar. 3	Fastenings for bags, &c.
Languard, H. L. (Bovenschen) - -	2043	May 15	Stoppering bottles.

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Langlet, F. (Abel)	4516	Nov. 21	Purifying sewage and foul waters.
Langley, J., & Cocker, S.	692	Feb. 18	Tramway chairs and rails.
" T.	391	Jan. 31	Tramway chairs and rails.
Langlois, E. F.	2297	May 31	Cutting fabrics, wood, &c.
Langston, J. A.	2958	July 20	Illuminating clocks.
Langston-Jones, H.	1682	Apr. 21	Disinfectants and deodorisers.
Lanaley, D. T., & Alexander, E.	1084	Mar. 13	Boilers.
" J.	172	Jan. 17	Horse-shoes.
Lanyon, J.	380	Jan. 29	Water-closets and valves for same.
La Peyrouse, L. A. L. E. P. de	3209	Aug. 15	Gas-making.
Laporte, J. & Motz, W. (Hughes)	1605	Apr. 15	Feeding steam-boilers.
Larard, F.	1591	Apr. 13	Hinges.
" F.	3565	Sep. 12	Mouldings or beadings for show-cases, &c.
" F.	3918	Oct. 10	Hinges.
Larmanjat, J. (Clark)	5021	Dec. 28	Moulding inlaid designs in making tiles.
Larmarand, F. (Clark)	2831	July 11	Water-meters.
Laroque, E. de	948	Mar. 4	Artificial marbles, &c.
Larrabee, B. F. (Lake)	4622	Nov. 29	Unhairing, scouring, &c. hides and skins.
Lascelles, C. T. E.	1961	May 10	Explosive gas-engines.
" W. H.	1988	May 11	Railway and tramway sleepers.
" W. H.	2976	July 22	Forming dowel joints.
La Serre, L. S. (Lake)	4494	Nov. 20	Lace machines for making woven fabrics, &
Lastelle, F. M. de	2461	June 14	Candles.
La Taste, P. M. de, & Leoni, F.	4953	Dec. 22	Ships and life-saving apparatus.
Latham, E., & Torton, T.	1457	Apr. 5	Steam-engine for raising, &c. weights.
LaTorrey y Montalbo, J. M. de (De Aragon)	4199	Oct. 30	Hand and sewing-machine needles.
Latouche, Bros. E. T. (Johnson)	3490	Sep. 5	Carpets and rugs.
Latour, F. C., & De Kinder, J.	565	Feb. 11	Steeping, bleaching, separating, &c. fibre [treating textile fabri
Laughton, W., & Spalding, T. W.	1619	Apr. 18	Treating caustic lye waste.
Laurence, G. G.	2605	June 24	Lowering, &c. ships' boats.
Lauritzen, S. (Brewer)	3537	Sep. 8	Telegraphic receiving instruments.
Laulh, B. (Wise)	4158	Oct. 26	Rolling hoops, straps, and plates.
Lavalette, J. A. A. C. de	2662	June 28	A hydraulical motor.
Lavie, H.	3804	Sep. 30	Heels for boots and shoes.
Law, E. G.	4051	Oct. 20	Double-action sashes.
" H.	137	Jan. 13	Water-supply apparatus for water-closets, &
Lawden, T. T., & Thomas, J.	2235	May 27	Fire-arms.
" T. T., & Thomas, J.	3291	Aug. 22	Fire-arms.
Lawes, T., & McLennan, D.	784	Feb. 24	Extinguishing fire.
Lawrence, H.	488	Feb. 7	Rollers, drums, and sheaves.
Lawrence, L. P. (Haddan)	1982	May 11	Castors.
" L. P. (Barr)	4335	Nov. 9	Ironing table.
" L. P. (Barr)	4472	Nov. 18	Castor.
Lawrence, P.	1264	Mar. 24	Gas and other stoves.
" W.	3713	Sep. 22	Refrigerating and heating liquids.
Lawrie, T.	34	Jan. 4	Pavements and fashioning stone for same.
Lawson, H. J., & Likeman, J.	2649	June 27	Bicycles.
" J.	3326	Aug. 24	Woven fabrics for carpets, curtains, &c.
" T., & Good, J.	2841	July 12	Preparing fibres.
Lawther, A. B.	319	Jan. 26	Treating oleaginous seeds.
" A. B.	335	Jan. 27	Cutting, &c. linseed cake.
Laycock, F. & J.	757	Feb. 23	Fulling or milling fabrics.
" J. & F.	757	Feb. 23	Fulling or milling fabrics.
Laysell, G.	3874	Oct. 6	Planing-machines.
Lea, H., & Holmes, J. M.	2897	July 14	Feeding fuel to furnaces, fire-boxes, &c.
Leach, C. T.	1887	May 5	Roller skates.
" W., & Wilson, R.	2583	June 23	Ejectors for raising, &c. liquids.
Leachman, W. B., & Nussey, G. H.	242	Jan. 21	Pressing woven, &c. fabrics.
Leaker, A. A.	1879	May 4	Billiard-table cushion.
" A. A.	4265	Nov. 4	Cushion for billiard tables.
Leas & Barnard Manufacturing Co. [(Haddan).]	4282	Nov. 6	Grain separators and scourers.

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<i>Leathers, L. L. (De Pass)</i>	4881	Dec. 18	Artificial stone.
<i>Leber, J.</i>	2177	May 23	Cutting and stamping blocks.
<i>Le Bret, B. (Gedge)</i>	82	Jan. 6	Signalling on trains.
<i>Le Bréton, E. M. J.</i>	8	Jan. 1	Motive-power.
<i>Lecher, T. T., & Hammond, J. G.</i>	2760	July 6	Screw-stocks.
<i>Lechner, F. M., Sessions, F. C., & Jeffrey, J. A. (Haddan)</i>	1707	Apr. 22	Mining-machines.
<i>Lecœur, E. J. J.</i>	4835	Dec. 14	Combing fibres.
<i>Lecœur, E. J. J., Pinel, M. P. A., & Hetherington, J. M.</i>	254	Jan. 21	Combing fibres.
<i>Lecomte, E.</i>	3292	Aug. 22	Piano-forte ("Eolian-piano").
<i>Ledger, J. (Noufflard)</i>	3241	Aug. 17	Steam-boiler registers.
<i>J. (Tampier)</i>	3982	Oct. 13	Light-holder.
<i>J. (Lemoine)</i>	4001	Oct. 17	Ships for saving life.
<i>J. (Jullien)</i>	4499	Nov. 21	Making cast steel and hardening same.
<i>J. (Scribe-Visseur)</i>	4536	Nov. 22	Bobbins.
<i>J. (Tampier)</i>	4630	Nov. 30	Displaying advertisements.
<i>Lee, C.</i>	4989	Dec. 23	Horse-shoes and attachments for same.
<i>E.</i>	951	Mar. 6	Boots and shoes.
<i>J. D., & Crabtree, J.</i>	2394	June 8	Looms.
<i>W. (Pullon & Sykes)</i>	474	Feb. 5	Counting and registering apparatus for cars, &c.
<i>Leeming, J.</i>	2366	June 6	Looms.
<i>J., & Whyte, J.</i>	43	Jan. 4	Looms.
<i>Lees, T.</i>	2199	May 25	Curling brims of hats.
<i>T.</i>	3826	Oct. 3	Sawing-machinery.
<i>W.</i>	4687	Dec. 4	Steam-engines.
<i>Lefébure, B.</i>	231	Jan. 20	Traction-engines and locomotives.
<i>Legg, R.</i>	2849	July 12	Tobacco-cutting machines.
<i>Legge, J.</i>	1790	Apr. 28	Fettling for furnaces.
<i>Le Grand, A.</i>	2174	May 23	Turnstiles.
<i>Legru, H., & Sencier, G. (Johnson)</i>	4301	Nov. 7	Refining saccharine liquids, &c.
<i>Leigh, J., & McDowell, R. W. H.</i>	4898	Dec. 19	India-rubber tyres for wheels.
<i>R.</i>	1667	Apr. 21	Constructing ceilings.
<i>R.</i>	3991	Oct. 16	Hoop-iron and applying same.
<i>Leighs, A. L. S.</i>	3007	July 26	Impenetrable casing for forts, &c.
<i>Leland, E. A. (Lake)</i>	1762	Apr. 26	Screws and screw-drivers.
<i>E. A. (Lake)</i>	2637	June 26	Couplings for pipes, faucets, &c.
<i>Leloup, E. (Thompson)</i>	981	Mar. 7	Preventing incrustation in steam-boilers, &c.
<i>E. (Thompson)</i>	3440	Sep. 1	Roller skates.
<i>Le Lubez, P. A. V. (Soulice)</i>	596	Feb. 14	Grinding pepper-box.
<i>Lemaire-Douchy, A. (Alexander)</i>	2107	May 18	Ascertaining composition of air in mines.
<i>Lemoine, F. F. (Ledger)</i>	4001	Oct. 17	Ships for saving life.
<i>Lemon, W. J.</i>	4685	Dec. 4	Making tobacco.
<i>Lemonnier, T. E., & Malhère, E.</i>	1018	Mar. 9	Reeds or combs for lace-making.
<i>Lemouche, F. J.</i>	2109	May 18	Valve-gear for Corlis and other engines.
<i>Lennon, H. (McLean)</i>	2019	May 13	Reaping-machine knife-grinders.
<i>Lenoir, J. L. (Newton)</i>	3691	Sep. 20	Railway sleepers.
<i>Leonard, C., & Phillips, C.</i>	4153	Oct. 26	Trunk and box fastenings.
<i>Leoni, F., & De La Taste, P. M.</i>	4953	Dec. 22	Ships and life-saving apparatus.
<i>S.</i>	4106	Oct. 24	Boilers heated by gas.
<i>Le Riche, E.</i>	1735	Apr. 24	Roller skate.
<i>Leroy, L. Dissés- (Browne)</i>	69	Jan. 6	Preserving and waterproofing leather, canvass, [string, &c.]
<i>Lespermont, L. J. A. (Clark)</i>	2524	June 17	Evaporating and incinerating.
<i>Lester, R., & Mitford, W.</i>	4802	Dec. 12	Making puddled steel or iron.
<i>Lesware, J. J.</i>	579	Feb. 12	Roller skates.
<i>Leullier & Cahen Lambert, L. (Thompson)</i>	663	Feb. 17	Indicating, &c. steam-pressure.
<i>Leveaux, E. H.</i>	2985	July 24	Steam-engines.
<i>Leventhorpe, C., & Guerrant, J. C. (Jensen).</i>	842	Feb. 29	Liquid and fluid meters.
<i>Lever, A., & Pearse, W. F.</i>	2377	June 7	Name and number indicators.
<i>Leverett, J.</i>	2878	July 14	Sanitary pails or vessels.
<i>Levesley, W., & Marshall, W.</i>	2732	July 3	Handles for knives, &c. and fixing same.

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Levinstein, I. - - - - -	238	Jan. 20	Treating, &c. magenta residues.
Lévy, D. - - - - -	2652	June 27	Driving-straps or belts.
" J. - - - - -	872	Mar. 1	Umbrellas, parasols, &c.
" L. Gunzburger - - - - -	315	Jan. 26	Motive-power engine.
Lewine, Julia (Clark) - - - - -	3396	Aug. 28	Glove-fastener.
Lewis, E. - - - - -	3865	Oct. 6	Smoking-pipes and cigar-holders.
Lewis, E. E. (Throop) - - - - -	3446	Sep. 1	Railways.
Lewis, E. S. & G. - - - - -	1936	May 9	Stay-busks.
" G. & E. S. - - - - -	1936	May 9	Stay-busks.
" J. - - - - -	307	Jan. 26	Closing or stoppering bottles.
" J., & Jones, H. - - - - -	928	Mar. 4	Roller skates.
" J., & Shorrock, W. - - - - -	1082	Mar. 13	Heald springs.
" J. S. - - - - -	2684	July 14	Umbrella furniture.
" S. S. - - - - -	1157	Mar. 17	Making soap.
" T. - - - - -	3117	Aug. 5	Bottle-stoppers.
" W. G. - - - - -	3426	Aug. 31	Bicycles and other velocipedes.
" W. G. - - - - -	3793	Sep. 29	Bicycles and other velocipedes.
Lewis, W. G. (Hunt) - - - - -	1600	Apr. 15	Wringing and mangling.
Lewtas, J. - - - - -	2758	July 6	Lighting, heating and cooking.
Ley, F. - - - - -	1244	Mar. 23	Locking nuts on bolts.
" G. W. - - - - -	4934	Dec. 21	Ornamental wood and metal articles.
Liasse, A. (Haddan) - - - - -	4093	Oct. 23	Despatch tubes.
Liddicott, P. - - - - -	230	Jan. 20	Plate-warmer and refrigerator.
" P. - - - - -	2949	July 19	Plate-warmer and refrigerator.
Liebe, P. (Pieper) - - - - -	1800	Mar. 27	Printing on rough surfaces.
Lightfoot, T. B. - - - - -	1624	Apr. 18	Agitating contents of vats, pans, &c.
" T. B. - - - - -	4642	Nov. 30	Squeezing-machines for working metals.
Likeman, J., & Lawson, H. J. - - - - -	2649	June 27	Bicycles.
Lill, R., & Innes, G. - - - - -	1672	Apr. 21	Castors.
Lilley, J., Adams, E. C., Browne, S. G. & Boby, W. - - - - -	964	Mar. 6	Hydraulic-elevator.
Limelette, R. J. P. Van der Haeghen (Newton). - - - - -	1068	Mar. 11	Vitreous colours.
Limousin, S. - - - - -	294	Jan. 25	Medicinal capsules.
Lind, W., & Lippman, H. (Salamon) - - - - -	2403	June 9	Sewing-machines.
Linde, C. - - - - -	1458	Apr. 5	Refrigerating and freezing.
Lindemann, G. - - - - -	544	Feb. 10	Street tramways.
" G. - - - - -	3142	Aug. 8	Tramways; driving carriages on same.
Linderhaus, H. (Sonnenthal) - - - - -	2098	May 18	Safety belt-shipper.
Lindsay, J., & Urquhart, W. W. - - - - -	1612	Apr. 18	Cutting or dressing stone, &c.
" J. B. - - - - -	4189	Oct. 30	Vessels for storing, &c. corrosive liquids.
Linford, C. - - - - -	2824	July 11	Gas-engines.
Lingard, T. W., & Sinnatt, F. & W. H. - - - - -	1469	Apr. 6	Bottle-stoppers.
Linsley, J. S. (Lake) - - - - -	4775	Dec. 9	Ventilating, warming, and cooling buildings.
Linton, E. F. (Lake) - - - - -	1497	Apr. 8	Pyrotechnic signals.
Linton, F. S., & Waters, F. - - - - -	2324	June 3	Roofing tiles and keying same.
Lippacher, I., & d'Herville, L. G. - - - - -	3182	Aug. 11	Bathing apparatus; saving life.
" (Browne). - - - - -			
Lippert, E. W., & Behr, F. (Morgan-Brown). - - - - -	2050	May 16	Self-closing valves.
Lippincott, W. H. (Woodward) - - - - -	2186	May 24	Billiard balls.
Lippman, H., & Lind, W. (Salamon) - - - - -	2403	June 9	Sewing-machines.
Lissagaray, H. P. O. (Johnson) - - - - -	2614	June 24	Manure.
Lissignol, A. A. E. (Hautermann) - - - - -	804	Feb. 26	Reducing condensation of steam in valve-chests, &c.
Lister, G. - - - - -	2062	May 16	Regulating water-wheels.
" H. - - - - -	3574	Sep. 12	Cooling fabrics after steaming or boiling.
" J., Hodgson, G., & Broadley, J. - - - - -	3062	July 31	Looms.
" S. C. - - - - -	1402	Mar. 31	Combing fibres.
Liston, J. - - - - -	1153	Mar. 17	Making pipe rolls for tobacco pipes.
Little, W. - - - - -	196	Jan. 18	Cleansing and disinfecting fluids.
Littlefield, C. W. (Haddan) - - - - -	1022	Mar. 9	Washing fabrics.
" C. W. (Haddan) - - - - -	1023	Mar. 9	Wringers.

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Livsey, P. J. (<i>Dimock</i>) - - - - -	3582	Sep. 13	Printing or embossing spools.
Llewellyn, W. H. - - - - -	3286	Aug. 22	Wheels for "corves;" oiling axles of same.
Lloyd, A. - - - - -	1358	Mar. 30	Window-sash fastener.
" A. - - - - -	1865	May. 3	Preparing food, &c.
" F. H., W. E., & W. H., & Faulkner, C. - - - - -	1158	Mar. 17	Steel, iron, and other metallic tubes.
" G. - - - - -	256	Jan. 21	Washing-machines.
" H. J. - - - - -	510	Feb. 8	Packing tobacco.
" P. - - - - -	1341	Mar. 29	Fences.
" S. - - - - -	2151	May 20	Making iron and steel.
" T. - - - - -	3312	Aug. 23	Ventilating cap or cowl.
" W. E., W. H. & F. H., & Faulkner, C. - - - - -	1158	Mar. 17	Steel, iron and other metallic tubes.
" W. H., F. H. & W. E., & Faulkner, C. - - - - -	1158	Mar. 17	Steel, iron and other metallic tubes.
Loader, C. - - - - -	2660	June 28	Elevating and stacking hay, &c.
Lobb, N. W. - - - - -	1075	Mar. 11	Farinaceous food.
Lobnitz, H. C. - - - - -	2132	May 20	Marine apparatus for attack and defence.
Lock, J. H. - - - - -	714	Feb. 19	Skating floors or rinks.
Locke, A. C. & N. C. (<i>Lake</i>) - - - - -	4699	Dec. 5	Valves for steam or other fluids.
" N. C. & A. C. (<i>Lake</i>) - - - - -	4699	Dec. 5	Valves for steam or other fluids.
Lockett, A. B. - - - - -	3280	Aug. 21	Swimming appliances.
Lockey, J. T. - - - - -	3479	Sep. 4	Evaporating brine.
Lockie, G. - - - - -	3395	Aug. 28	Preparing farinaceous food.
Lockwood, F. A. - - - - -	2966	July 21	Scouring, &c. leather or beaming hides.
" W. - - - - -	1275	Mar. 24	Buffer and bearing springs.
" W. - - - - -	4913	Dec. 20	Springs for railway carriages, &c.
Loe, W. C. - - - - -	1812	Apr. 29	Rink and parlour skates.
Loeb, B. (<i>Brewer</i>) - - - - -	1238	Mar. 23	Enabling persons to enter smoke-filled places.
" C. (<i>Loeb</i>) - - - - -	2211	May 25	Scarves.
Loeb, L. N. (<i>Loeb</i>) - - - - -	2211	May 25	Scarves.
Loeffler, J. C. L., & Higgs, R. W. H. P. - - - - -	4461	Nov. 18	Electric-telegraphs.
Lodge, J. - - - - -	2344	June 3	Textile fabric.
Lofts, E. - - - - -	1687	Apr. 21	Checking money payments in shops, &c.
Lomas, R. U. - - - - -	3097	Aug. 3	Umbrella and parasol frames.
Lomax, H. - - - - -	3168	Aug. 10	Sewing-machine needles.
Loug, R. (<i>Clark</i>) - - - - -	3093	Aug. 2	Fish-joints, bolts, and nut-locks.
" O. (<i>Ivimey</i>) - - - - -	3458	Sep. 1	Material for a carpet lining.
Longbottom, C., & Harris, P. - - - - -	2927	July 18	Learning skating.
" J. - - - - -	2342	June 3	Bottle-stopper.
Longworth, D. - - - - -	2794	July 8	Pneumatic hammers and stamps.
Lonlin, D. F. (<i>Clark</i>) - - - - -	386	Jan. 31	Dynamo-electric machines.
" D. F. (<i>Clark</i>) - - - - -	3264	Aug. 19	Dynamo-electric & magneto-electric machines.
Looney, R. - - - - -	2772	July 7	Washing and wringing machines.
Lord, A. - - - - -	1516	Apr. 10	Looms.
" W., & Kaberry, L. - - - - -	3342	Aug. 25	Cleaning cotton.
" W., & Jackson, G. - - - - -	4772	Dec. 9	Looms.
Lorthioir, J. F. (<i>Bonneville</i>) - - - - -	4997	Dec. 27	Varnish.
Lotz, W. F. (<i>Diets</i>) - - - - -	534	Feb. 10	Portable lanterns.
Louis, A. H. - - - - -	174	Jan. 17	Writing pen.
Loutrel, C. H., <i>Braidwood, W., & Francis, L. (Marler)</i> - - - - -	4351	Nov. 10	Perforating paper, &c.
Louttit, K. McL. P. - - - - -	1499	Apr. 8	Gas-making.
Love, G. & W. - - - - -	773	Feb. 24	Brick-making.
" W. & G. - - - - -	773	Feb. 24	Brick-making.
Lovell, T. - - - - -	2387	June 7	Purifying sewage.
Lovelock, J. F. - - - - -	618	Feb. 15	Preparing and mincing food.
Low, G. - - - - -	2756	July 5	Steam-engine starting gear and governors.
" H. (<i>Braun</i>) - - - - -	803	Feb. 26	Roller skate.
" H. (<i>Braun</i>) - - - - -	815	Feb. 28	Artificial ice rink.
Lowber, D. C. - - - - -	1705	Apr. 22	Disinfecting and packing manures.
" D. C. - - - - -	2619	June 24	Bale-ties.
Lowe, E. - - - - -	1545	Apr. 11	Lock-nut or catch for cupboard doors.

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Lowe, W. (<i>Dalton</i>) - - - - -	3636	Sep. 16	Lamp for burning kerosene, &c.
Lowndes, A. E. G., & Claus, C. F. - -	3992	Oct. 16	Detergents and applying same.
„ R., & Wilkinson, E. - - -	823	Feb. 28	Belting or driving bands, &c.
Lowne, R. M. - - - - -	1128	Mar. 16	Anemometers.
„ R. M., & Hicks, J. J. - - -	1001	Mar. 8	Counting coins.
Lowry, G. - - - - -	478	Feb. 5	Drilling-machines.
„ G. - - - - -	542	Feb. 10	Roller or rink skates.
„ G. - - - - -	989	Mar. 6	Roller or rink skates.
„ G. - - - - -	1221	Mar. 22	Roller or rink skates.
„ G. - - - - -	3377	Aug. 28	Turnstiles.
„ G. - - - - -	4033	Oct. 19	Roller skates.
„ G. - - - - -	4828	Dec. 14	Carriages for distributing sand, &c.; arranging [carriages on springs]
Lozier, Jennie De La M. (Clark) - -	3948	Oct. 12	Exercising-apparatus; testing chains, &c.
Lubez, P. A. V. le (<i>Soulice</i>) - - -	596	Feb. 14	Grinding pepper-box.
Lucas, A. H., Prince, L. F., & Edwards, [R. L. (Newton)].	4308	Nov. 7	Egg-boxes or cases.
Lüdeke, J. E. F. - - - - -	2075	May 17	Movement or power for clocks, &c.
„ J. E. F. - - - - -	3829	Oct. 3	Motive-power.
Lüders, R. (Haddan) - - - - -	1778	Apr. 27	Lighting conveyances.
„ R., & Mittner, J. A. (Haddan)	3175	Aug. 11	Looms.
Lugo, O., & Gaudolfo, J. (Clark) - -	2535	June 19	Preparing bone-black; making, &c. sugar.
Luke, S., & Southgate, C. J. - - -	1938	May 9	Screw-propellers.
Lulham, E. W. - - - - -	267	Jan. 22	Roller skate and boot.
Lumb, J. - - - - -	4417	Nov. 15	Twisting or doubling machinery.
„ J., & Haigh, J. - - - - -	1443	Apr. 4	Lubricating engine cylinders, &c.
Lund, J. A. - - - - -	3924	Oct. 11	Synchronizing clocks and transmitting time [currents]
Lundgreen, W. (Jensen) - - - - -	2889	July 14	Shirt-fronts.
Lundh, S. H. - - - - -	4849	Dec. 15	Preventing escape of sparks from engines, &c.
Lundy, J. J. - - - - -	1191	Mar. 20	Preserved food tins.
Lutticke, G. F. - - - - -	3888	Oct. 7	Acrobatic toy figure.
Lyle, A. - - - - -	3049	July 29	Shaping sugar.
Lynam, J. - - - - -	168	Jan. 15	Stocks for holding machine tools.
Lynch, J. B. - - - - -	135	Jan. 12	Swivels.
Lyon, E., J. & T. - - - - -	4915	Dec. 20	Bottle-stoppers.
„ J., T. & E. - - - - -	4915	Dec. 20	Bottle-stoppers.
„ T., E. & J. - - - - -	4915	Dec. 20	Bottle-stoppers.
Lyon-Field, J. - - - - -	2142	May 20	Telescopes.
„ J. - - - - -	2144	May 20	Drills for dental operations.
„ J. - - - - -	2145	May 20	Engraving or cutting seals.
Lyon, M. - - - - -	3902	Oct. 10	Medicated sweetmeats.
Lyte, F. Maxwell - - - - -	1728	Apr. 24	Propelling torpedoes.
„ F. Maxwell - - - - -	4826	Dec. 13	Producing ammonia anhydride.
Lyttle, W. A. - - - - -	2308	June 1	Exposing substances to heat & chemical action
M.			
Mabson, J. - - - - -	1925	May 8	Transmitting rotary motion.
Mabut, La Société Comte & Jolissaint- [Vouëche (Tongue)].	1476	Apr. 6	Textile leather.
Macadam, J. W., & Bowman, W. - -	1644	Apr. 19	Sash-bars for greenhouses, &c.
McArthur, W. - - - - -	289	Jan. 25	Steam-cranes.
„ W. - - - - -	4429	Nov. 16	Making sheets of lead, tin, copper, &c.
Macartney, G. - - - - -	3092	Aug. 2	Couplings for fire-hose, pipes, &c.
Macaulay, H. - - - - -	503	Feb. 8	Rink skates.
„ H., Waide, F. W., & Mor- [gan, J. C.]	178	Jan. 17	Fire-places, stoves, &c.
McAvoy, H. L. - - - - -	2634	June 26	Stoves and furnaces for heating, &c.
Macbuy, A. J. (Newton) - - - - -	776	Feb. 24	Converting fibrous substances into substitute [for wood, &c.]

Name.	Number of Application.	Date of Application.	Subject.
McCabe, J.	4950	Dec. 22	Making looped or terry fabrics.
„ J., & Walker, J.	2903	July 15	Looms.
McCandlish, R. D.	4974	Dec. 23	Bicycle breaks.
McCardle, A., & Dobson, J.	2842	July 12	Colour-printing machinery.
McClean, F.	3780	Sep. 28	Spectroscopes.
McCormick, C. H. (Lake)	4085	Oct. 21	Harvesting-machines.
„ C. H. (Lake)	4086	Oct. 21	Harvesting-machines.
„ C. H. (Lake)	4100	Oct. 23	Harvesting-machines.
McCormick, W. (Andrews)	764	Feb. 23	Tables for vessels.
McCorquodale, G. F.	4350	Nov. 10	Printing envelopes, cards, circulars, &c.
McCraith, H., & Brierley, J.	1254	Mar. 24	Bottles and stoppers.
McCulloch, D. & T., & Burnett, J.	2357	June 6	Steam and other engines.
„ T. & D., & Burnett, J.	2357	June 6	Steam and other engines.
Macdermott, M., & Elliott, G. W.	1346	Mar. 29	Wedge for breaking away coal, &c.
„ M., & Elliott, G. W.	4767	Dec. 9	Implement for breaking down coal, &c.
McDiarmid, F.	4317	Nov. 8	Casks for malt liquors, &c. and taps.
Macdonald, A.	1089	Mar. 10	Throstle and other bobbins.
MacDonald, J.	1734	Apr. 24	War rockets.
Macdonald, J. D.	3567	Sep. 12	Ventilating apparatus.
McDonald, T.	4565	Nov. 25	Paring oil-cake.
McDonell, A. E.	430	Feb. 3	Escritoir or desk and cabinet.
McDonnell, C. & W.	2482	June 15	Treating and packing butter, &c.; cooling [apparatus.]
„ W. & C.	2482	June 15	Treating and packing butter, &c.; cooling [apparatus.]
McDougall, I. S.	992	Mar. 7	Furnaces or fire-places.
McDowall, D.	1786	Apr. 28	Sawing wood.
McDowell, R. W. H., & Leigh, J.	4898	Dec. 19	India-rubber tyres for wheels.
Mace, C.	312	Jan. 26	Steam-engine condensers.
„ C., & Brewster, J.	2721	July 1	Consuming smoke, &c., in boiler furnaces.
Macedo, J. A. de	4836	Dec. 14	Egg-boiler.
McEvoy, B.	371	Jan. 29	Pulleys for rick-covers, &c.
„ C. A.	831	Feb. 28	Gas-lighting apparatus.
„ C. A.	3718	Sep. 22	Inhaling and diffusing apparatus.
McEwen, M.	3260	Aug. 19	Making tobacco.
McFarlane, W., & McPherson, A.	1378	Mar. 30	Leno curtains, blinds, &c.
McGee, W.	378	Jan. 31	Winding sewing thread.
„ W.	2646	June 27	Spooling or thread-winding machines.
McGill, D.	574	Feb. 12	Railway carriage couplings.
„ J.	3908	Oct. 10	Arranging, cutting, &c. railway tickets.
„ J.	3910	Oct. 10	Cabinet for parcel-forwarding offices.
McGlashan, J.	3964	Oct. 13	Smoke consuming apparatus.
McGrath, J., & McKean, J.	1540	Apr. 11	Snipping or combing fibres.
McGregor, A.	3441	Sep. 1	Reaping and mowing machines.
Machines Manufacturing Co., Hum- boldt (Wirth)	1520	Apr. 10	Gas-engines.
Mellwraith, W.	4346	Nov. 10	Shedding mechanism for looms.
McInnes, J.	1377	Mar. 30	Actuating continuous brakes.
„ J., & Steel, J.	1527	Apr. 11	Blast-pipe exit for locomotives.
Macintosh, J.	1265	Mar. 24	Raising sunken vessels.
„ J. M., & Boggett, W.	908	Mar. 3	Air-proof articles.
„ J. M., & Boggett, W.	3763	Sep. 28	Air or water-proof articles.
McIvor, R.	4616	Nov. 29	Coating steam-boilers, pipes, &c.
McJannet, J.	1230	Mar. 22	Ball-cock.
Mackay, F. N.	769	Feb. 24	Ice skating and curling rinks.
„ F. N.	1337	Mar. 29	Ice-making for skating, &c.
McKay, G. (Lake)	3349	Aug. 25	Boot and shoe sewing-machine.
Mackay, J.	4783	Dec. 11	Roller skates.
McKay, R.	4605	Nov. 28	Tins for paints, preserved food, &c.
McKean, J., & McGrath, J.	1540	Apr. 11	Snipping or combing fibres.
McKechnie, A.	3943	Oct. 12	Steering apparatus.
„ D.	2397	June 8	Treating compounds of iron.
„ D.	4756	Dec. 8	Treating iron oxides for producing iron.

Name.	Number of Application.	Date of Application.	Subject.
McKendrick, J., & Ball, H. W. - -	3743	Sep. 25	Distilling water.
„ J., Ball, H. W., & Watson, [R. G.]	3882	Oct. 7	Motor, pump or meter, and valves for same.
Mackenzie, F. W. - - - - -	517	Feb. 9	Drying tea.
Mackenzie, F. W. (Thomson) - -	3119	Aug. 5	Drying tea.
McKenzie, G. R. - - - - -	4768	Dec. 9	Diminishing inflammability of wood.
Mackenzie, J. - - - - -	3766	Sep. 27	Weighing-machines.
„ J. - - - - -	3872	Oct. 6	Marine governors.
Mackie, J. - - - - -	452	Feb. 4	Drawing or thinning plants.
„ R. - - - - -	1012	Mar. 9	Scotch bonnets, hats, &c.
„ S. J., Faure, C. A., & Trench, G.	2742	July 4	Explosives.
McKiernan, C. (Whight) - - -	595	Feb. 14	Steam-whistles.
Macrow, G. C. - - - - -	2451	June 14	Labelling homœopathic medicines.
McLaren, A. - - - - -	1113	Mar. 15	Steam-traps.
„ A. - - - - -	2216	May 26	Stable fittings.
McLaughlan, D. J. (Copping) - -	2676	June 29	Printing and cutting lozenges.
McLaurin, P. - - - - -	2856	July 13	Finishing paper.
Maclean, C. M. - - - - -	1185	Mar. 20	Roller or wheel skates.
„ T. (Stockwell) - - - - -	4427	Nov. 15	Lighting cigars and pipes.
„ W. (Lennon) - - - - -	2019	May 13	Reaping-machine knife-grinders.
MacLellan, G. - - - - -	1872	May 4	Packing for steam-engines, &c.
McLennan, D., & Lawes, T. - -	784	Feb. 24	Extinguishing fire.
„ W. - - - - -	2983	July 24	Lifting and force pumps.
McLeod, H., & Clark, G. S. - -	4501	Nov. 21	Determining velocity of rotating bodies.
McLiesh, W. - - - - -	3374	Aug. 28	Photographic apparatus.
McLintock, J., & Brown, J. W. -	559	Feb. 11	Roller skates.
McManus, H. - - - - -	621	Feb. 15	Loom-pickers.
„ H., & Plass, R. H. - - -	3422	Aug. 30	Gas-governors.
McMillan, J. - - - - -	3040	July 28	Rivetted iron ships, &c.
McMinnies, J. G. - - - - -	2508	June 16	Balls for ball-taps or valves.
Macnab, J. - - - - -	3150	Aug. 9	Getting coal, &c.; blasting rock.
McNabb, W., & Weatherdon, B. F. -	2094	May 18	Boat and mode of employing same.
McNaughten, G. - - - - -	2074	May 17	Steam-engines.
McNeil, J. - - - - -	2478	June 15	Lathes and machine tools.
Macneill, Sir J. - - - - -	1618	Apr. 18	Measuring, &c. water supply.
Macpherson, A. - - - - -	3489	Sep. 5	Lowering and disengaging ships' boats.
McPherson, A., & McFarlane, W. -	1378	Mar. 30	Leno curtains, blinds, &c.
„ G., & Baird, A. - - - -	2802	July 10	Lubricating axles of coal hutches, &c.
McPherson, J. B., Gilbert, Le De H., & [Bigler, C. S. (Lake)]	883	Mar. 1	Brick-making.
Macquay, P. - - - - -	2067	May 17	Rink and other skates.
„ P. - - - - -	4231	Nov. 1	Buckle tongues.
Macqué, L. (Clark) - - - - -	237	Jan. 20	Grain mills.
Macqueen, J., & Dobson, B. A. - -	4149	Oct. 26	Preparing, spinning, &c. fibres.
Macrae, A. S. (Mills) - - - -	3236	Aug. 17	Making fecula, farina, and starch.
McRae, D. - - - - -	1452	Apr. 5	Sewing-machine feed-mechanism.
Mactear, J. - - - - -	2073	May 17	Alkali furnaces; obtaining copper.
„ J. - - - - -	2102	May 18	Furnaces for decomposing chlorides.
„ J. - - - - -	2805	July 10	Furnaces for making chromates.
„ J. - - - - -	3848	Oct. 5	Utilising bye-products of soda, &c.
McWhinnie, J. - - - - -	3261	Aug. 19	Distance indicators for tram-cars, &c.
„ J. - - - - -	4114	Oct. 24	Indicating distances, checking fares, &c. in [tram-cars.]
Maden, E. - - - - -	1412	Apr. 1	Compressing air.
Madge, C. - - - - -	3160	Aug. 9	Treating tin andterne plate scrap.
Maey, H. (Wirth) - - - - -	3362	Aug. 26	Railway brakes.
Magaud-Charf, J. - - - - -	1314	Mar. 27	Making corks.
Magner, P. - - - - -	3947	Oct. 12	Treating fibres to give silky appearance.
Magniat, H. L. - - - - -	3073	Aug. 1	Joint for steam, gas and water engines.
Magnus, G. - - - - -	563	Feb. 11	Billiard balls, &c.
Maitre, E. (Bonneville) - - - -	532	Feb. 10	Mode of flooring.
Major, W. - - - - -	2495	June 16	Preventing priming, &c. in steam-boilers.
Makarov, S. (Anderson) - - - -	1066	Mar. 11	Working bilge pumps.

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Makin, C. W. L. & E. A., & Marcroft, B.	841	Feb. 29	Sample envelopes and bags.
" E. A. & C. W. L., & Marcroft, B.	841	Feb. 29	Sample envelopes and bags.
Malcolm, R. A.	756	Feb. 23	Iron and steel tubes, &c.
Malcolmson, H.	1722	Apr. 24	Roller skates.
Malen, L. (Newton)	1138	Mar. 16	Obtaining extracts, &c.
Malfroy, A. (Payre)	1057	Mar. 11	Liquid-meter.
Malhère, E., & Lemonnier, T. E.	1018	Mar. 9	Reeds or combs for lace making.
Malings, J.	1291	Mar. 25	Cricket balls.
" J.	5047	Dec. 29	Cricket balls.
Mallary, G. H. (Nelson)	3704	Sep. 21	Making paper bags.
Mallet, A. A. P. (Clark)	3485	Sep. 4	Purifying gas.
Mallinson, J., & Dewrance, J.	4540	Nov. 22	Cocks.
Mallol, J., & Green, G.	4037	Oct. 19	Mounting electro-plate wares.
" J., & Green, G.	4038	Oct. 19	Revolving dishes, butter-coolers, &c.
Mallory, D. D. (Haddan)	3348	Aug. 25	Disintegrating quartz, &c.
Manier, E. (Wise)	1142	Mar. 16	Lifting jack.
Mann, E. E. (Morgan-Brown)	3956	Oct. 13	Marine danger signal.
Mann, T. H.	2462	June 14	Strap buckle or fastening.
Manning, R. S. (Mills)	1542	Apr. 11	Smoking pipes.
" R. S. (Mills)	1543	Apr. 11	Boots and shoes.
Mannstaedt, L. (Prange)	2520	June 17	Making tin plates.
Mans, B. F. N. Fayolle de (Gedge)	4930	Dec. 21	Forging bolts.
Manwaring, W. G., & Samuelson, B.	682	Feb. 18	Harvesting-machines.
" W. G., & Samuelson, B.	3578	Sep. 12	Harvesting-machines.
Mapleson, J. H.	2146	May 20	Tents.
Mappin, W. S.	19	Jan. 3	Roller skates.
" W. S.	3318	Aug. 24	Roller skates.
Marais, E. et Cie. (Gardner)	4178	Oct. 28	Toy or imitation birds.
" E. L., Durand, F., & Whieldon, [W.]	654	Feb. 17	Pressing or moulding bricks.
March, G.	418	Feb. 2	Spinning fibrous substances.
" T. C.	830	Mar. 4	Applying glass to ribbons, &c.
" W.	3657	Sep. 19	Hoisting engine for raising coal, goods, &c.
Marchal, J., & Périnaud, J.	3018	July 26	Suppling silk fabrics.
Marchand, H. E. (Browne)	1044	Mar. 10	Valves for engines, &c.
Marchant, G. M.	121	Jan. 11	Steam and water taps.
" R. M.	2219	May 26	Pumps and condensers for engines, &c.
" R. M.	4504	Nov. 21	Pumps and condensers for engines, &c.
Marcroft, B., & Makin, E. A. & C. W. L.	841	Feb. 29	Sample envelopes and bags.
Mardon, H.	1058	Feb. 11	Printing-machinery.
Margat, C. (Thompson)	4615	Nov. 29	Drawing off and measuring, &c. petroleum.
Margotti, J.	1043	Mar. 10	Bottle and jar stoppers.
" J.	3535	Sep. 8	Bottle and jar stoppers.
Marinoni, A. H. (Clark)	681	Feb. 18	Printing-machines.
" A. H. (Clark)	2511	June 16	Printing from blocks and electrotypes.
Mark, J., & Wilson, G.	2504	June 16	Morticing-machines.
Markland, W.	1518	Apr. 10	Regulating warp tension in looms.
Marle, R.	4285	Nov. 6	Penholders.
Marler, E. T. (Braidwood & Francis)	3982	Oct. 14	Paper-folding machinery.
" E. T. (Braidwood, Francis, & Loutrel).	4351	Nov. 10	Perforating paper, &c.
Marley, F., & Small, J. H.	3651	Sep. 18	Recording arrival, &c. of tram-cars at stations.
Marquet, F. (Brewer)	1809	Apr. 29	Closing preserved provision cases.
Marrel Bros. (Johnson)	4508	Nov. 21	Armour-plates.
" (Johnson)	4509	Nov. 21	Armour-plates.
" (Johnson)	4761	Dec. 8	Armour-plates and producing same.
Marriner, E. D. A., & Hoyle, C.	2627	June 26	Washing and drying wool, &c.
Marriott, R. S.	3397	Aug. 28	Indicators for streets and roads.
" W.	39	Jan. 4	Purifying coal gas.
Marsden, H. R. (Dalton)	755	Feb. 23	Crushing and pulverising substances.
" H. R. (Marsden)	2375	June 7	Crushing and pulverising substances.
Marsden, J.	2487	June 15	Billiard, bagatelle, and similar tables.
" J.	4173	Oct. 28	Billiard, bagatelle, and similar tables.

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Marsden, S. (<i>Marsden</i>) - - - - -	2375	June 7	Crushing and pulverising substances.
Marsh, J. & T., & Fell, J. C. - - -	1815	May 1	Lubricating spindles.
Marsh, P. O. (<i>Brewer</i>) - - - - -	146	Jan. 13	Sails of vessels.
Marsh, S. - - - - -	2834	July 12	Getting, breaking, and blasting coal, &c.
" S. - - - - -	4949	Dec. 22	Getting, breaking, and blasting coal, &c.
" T. & J., & Fell, J. C. - - -	1815	May 1	Lubricating spindles.
" W. R. - - - - -	245	Jan. 21	Drums of rice-cleaning and meal-dressing [chi
Marshall, C., & Haslam, L. - - -	1859	May 3	Looms.
" G. H. - - - - -	1403	Mar. 31	Working punkahs.
" J. - - - - -	1168	Mar. 18	Thrashing-machines.
Marshall, M. (<i>Thompson</i>) - - - -	2765	July 7	Knitting-machinery.
Marshall, N. - - - - -	1356	Mar. 30	Ice and rink skates.
" W., & Levesley, W. - - -	2732	July 3	Handles for knives, &c. and fixing same.
Martel, A. (<i>Gray</i>) - - - - -	3123	Aug. 5	Reversible table cloth.
Martin, A. - - - - -	1494	Apr. 8	Roller skates.
" A. - - - - -	3545	Sep. 9	Saving life, &c. in case of fire; lowering wei
" A. - - - - -	4328	Nov. 8	Boxes for matches, needles, &c.
" G., & Carpenter, J. - - -	2119	May 19	Clocks, &c.
" H., & Robertson, R. - - -	4821	Dec. 13	Horse-shoes and making same.
" J. - - - - -	722	Feb. 21	Umbrellas and parasols.
" J. C. - - - - -	223	Jan. 20	White lead.
" J. K. - - - - -	208	Jan. 19	Bobbins and reels.
" J. R. - - - - -	3884	Oct. 7	Rotary pumps and engines.
Martin, M. (<i>Pieper</i>) - - - - -	4592	Nov. 27	Peeling barley.
Martin, P. B. - - - - -	4815	Dec. 13	Rotary-engine.
" S. (<i>Müntz & Ramspacher</i>) - -	1673	Apr. 21	Urinals.
Martin, S. W. (<i>Thompson</i>) - - -	4476	Nov. 18	Screw-cutting apparatus.
Martin, W. - - - - -	2236	May 27	Motive-power.
" W. - - - - -	4304	Nov. 7	Umbrellas, parasols, and sunshades.
" W., Dawson, D. R., & Orchar, R. -	1909	May 6	Sewing-machines.
Martineau, G. (<i>Kohrig & Pzillas</i>) -	2169	May 22	Cutting sugar.
" G. (<i>Kohrig & Pzillas</i>) - - -	3267	Aug. 19	Cutting and packing sugar.
Martins, C. Le N. - - - - -	2122	May 19	Manual road carriages.
Marty, P. - - - - -	2046	May 15	Portable seat.
Marville, L. J. C., & Lacomme, J. M. A. -	3158	Aug. 9	Seats, benches, &c. for advertising.
[Tongue].			
Marx, W. - - - - -	1889	May 5	Locking-desk for albums.
" W. - - - - -	4743	Dec. 7	Easel-album.
Marzetti, C. T. - - - - -	2215	May 26	Bottling liquids.
Maschwitz, C. (<i>Meyer & Geiger</i>) - -	4169	Oct. 27	Opening preserved food metal cases, &c.
Mason, Adam - - - - -	3599	Sep. 14	Stoppers for steel ingot-moulds.
" Alfred - - - - -	3711	Sep. 22	Warming railway carriages.
Mason, Amasa (<i>Justice</i>) - - - - -	4641	Nov. 30	Sewing-machine embroidery attachment.
Mason, C. - - - - -	497	Feb. 8	Steam-pump valves.
" E., & Hallatt, B. - - - - -	4776	Dec. 11	Twist lace machines.
" H. E. N., & Crichley, H. - - -	2518	June 17	Chandeliers and lamps.
" Sir J., & Parkes, A. - - - -	2088	May 17	Treating ores and alloys of nickel.
" M. F., & Willett, W. - - -	1690	Apr. 21	Tea-kettles, coffee-pots, &c.
" R. F. - - - - -	1104	Mar. 14	Refrigerating apparatus for preserving meat,
" S., Wolstenholme, J., & [Spencer, S. -	4485	Nov. 20	Forming vacuum in paper-making machin
" T. - - - - -	4262	Nov. 4	Casting printing types.
Massey, G., & Knott, H. - - - -	2162	May 22	Taps for steam and liquids.
Massey, G. B., & Petty, J. N. (<i>Morgan</i>) -	3271	Aug. 19	Steam-engines.
Massey, J. E. - - - - -	3412	Aug. 30	Ships' logs and holding same.
Massicks, T., & Crooke, W. - - -	659	Feb. 17	Slide-valves for pipes.
Massie, J. (<i>Thomson</i>) - - - - -	2888	July 14	Sewing-machine attachments.
Matern, J. & J. (<i>Wirth</i>) - - - -	4514	Nov. 21	Drying bricks, cement, pottery, &c.
Mather, S. H., Ormesher, J. & W., & [Brown, S. -	3787	Sep. 28	Removing soot, &c. from steam-boiler flues
" W. - - - - -	250	Jan. 21	Steaming printed fabrics.
" W. - - - - -	1174	Mar. 18	Steaming and ageing printed fabrics.

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Mathers, J. - - - - -	1217	Mar. 22	Atmospheric carriage.
Mathieson, C. F. - - - - -	4576	Nov. 25	Gas-making.
Mathieu, J. L. (Mewburn) - - - - -	4547	Nov. 23	Shuttles.
Matthews, C. P., & Davis, J. C. - - - - -	3563	Sep. 11	Composition for insides of casks, &c.
" J. - - - - -	292	Jan. 25	Road locomotives; feed-heaters; steam-boilers.
" J. M. - - - - -	59	Jan. 6	Railway carriage and other door locks.
" W. - - - - -	2848	July 12	Brakes for cranes, &c.
Mattison, H. L. (Throop) - - - - -	4356	Nov. 10	Packing bags, sacks, tins, &c.
Matute, L. (Morgan-Brown) - - - - -	58	Jan. 6	Indexing and binding books.
Mauge, C. (Johnson) - - - - -	5045	Dec. 29	Reaping and mowing machines.
Mauger, V. E. (Clark) - - - - -	1955	May 10	Trimming playing cards.
Maurel, A. (Clark) - - - - -	5022	Dec. 28	Sifting and purifying semolina and groats.
" S., & Truel, C. (Morgan-Brown) - - - - -	4617	Nov. 29	Safety-valves.
Maurey, Deschamps, & Co., & Fauvello- [Delebarre (Abel).]	2346	June 5	Toilet-brushes and combs.
Maurmant, J. E. M. J. Tonnel, F. J., [& Wackernie, F. J. (Mewburn).]	2982	July 24	Throstle-frames.
Mauser Bros. (Johnson) - - - - -	4511	Nov. 21	Fire-arms.
Maw, A., & Hartley, J. W. - - - - -	1328	Mar. 28	Screw or fly-presses.
" G. - - - - -	3105	Aug. 3	Testing railway wheels.
" W. H., & Dredge, J. - - - - -	3526	Sep. 7	Pressure gauges and pyrometers.
Mawby, T. - - - - -	1771	Apr. 27	Frames for making looped fabrics.
Mawson, J. - - - - -	2225	May 26	Drilling or boring rocks and stone.
" J. - - - - -	4537	Nov. 22	Drilling or boring coal, rocks, and stone.
Mazim, H. S. (Coleman) - - - - -	2810	July 10	Steam-engines.
" H. S. (Bird) - - - - -	4518	Nov. 21	Reversing valve-motion for steam-engines.
Mazwell, J. R., & Cope, E. (Benson) - - - - -	629	Feb. 16	Steam-pump valves.
Maxwell, W., & Shepherd, W. - - - - -	575	Feb. 12	Workmen's "tell-tales."
Maxwell-Lyte, F. - - - - -	1728	Apr. 24	Propelling torpedoes.
" F. - - - - -	4826	Dec. 13	Producing ammonia anhydride.
May, C. N. - - - - -	1192	Mar. 20	Steam-boilers.
" T. P. - - - - -	1041	Mar. 10	Earth-closets.
Mayer, E. - - - - -	1266	Mar. 24	Repairing shafts, poles, &c. of vehicles.
" E. L. - - - - -	892	Mar. 2	Treating cupreous ores.
Mayer, M. (Silver) - - - - -	1688	Apr. 21	Screwing soles to boots, &c.; uniting leather.
" M. (Clark) - - - - -	4291	Nov. 6	Shafts and poles for vehicles.
Maynard, W. (Clark) - - - - -	3094	Aug. 2	Generating, &c. sulphurous & other acid gases.
" W. (Clark) - - - - -	4601	Nov. 28	Softening, cleansing, &c. fibres and fabrics.
Mayor, T. - - - - -	2910	July 15	Speeders and fly-frames for spinning machines.
Mays, J. A. - - - - -	546	Feb. 10	Facilitating locomotion of engines, &c.; port- [able tramways; traction wheels.]
" J. A. - - - - -	1009	Mar. 8	Roller and other skates.
" J. A. - - - - -	1384	Mar. 31	Roller and other skates.
" J. A. - - - - -	1479	Apr. 7	Roller and other skates.
" J. A. - - - - -	1886	May 5	Rollers or wheels for skates.
" J. A. - - - - -	2895	July 14	Lubricating.
" J. A. - - - - -	3157	Aug. 9	Locomotion.
" J. A. - - - - -	3335	Aug. 24	Roller skates and rollers for same.
" J. A. - - - - -	5004	Dec. 27	Roller skates.
Mazza, G. (Clark) - - - - -	1965	May 10	Boiler feed-water apparatus.
Meadowcroft, T., & Graves, T. - - - - -	1731	Apr. 24	Safety-apparatus for window cleaning, &c.
Mearns, J., Wandless, W., & Charlton, T. - - - - -	3990	Oct. 16	Making horse-shoes.
Mease, G. D. - - - - -	3719	Sep. 22	Steam-power alkali furnaces.
" G. D. - - - - -	4204	Oct. 31	Furnaces for decomposing chlorides of [sodium, &c.]
Meatyrd, O. G., & Barrell, R. - - - - -	4403	Nov. 14	Safety apparatus for railway trains.
Megill, E. L., Stockwell, H. B., & Merrill, [J. W. (Turner).]	1316	Mar. 27	Gas-lighting.
Meinen, J. C. - - - - -	3917	Oct. 10	Supplying beverages in restaurants, &c.
Melbourne, J., & Harding, R. G. - - - - -	676	Feb. 18	Rolling leather.
Melhuish, E. M. - - - - -	372	Jan. 29	Sewing-machines.
Mellanby, W. - - - - -	1038	Mar. 10	Tide, &c. indicator for lighthouses.

Name.	Number of Application.	Date of Application.	Subject.
Melling, T.	2155	May 20	Regulating pressure in pipes, &c.; and ^{man} [ing flow of fl
Mellor, H. M.	1042	Mar. 10	Circular knitting-machines.
" T. K., & Beaumont, S. . .	4819	Dec. 13	Cloth "raising" machines.
Menier, H. (Newton)	4705	Dec. 5	Telegraphic and other conductors.
Mennessier, E. (Lake)	1210	Mar. 21	Puddling furnace.
Merveise, J. (Thompson)	4347	Nov. 10	Roller skates.
Merrill, J. W., Megill, E. L., & Stockwell, [H. B. (Turner)].	1316	Mar. 27	Gas-lighting.
Merryweather, H., & Jakeman, C. J. W.	3727	Sep. 23	Tramway locomotives, &c.
" H., & Jakeman, C. J. W.	4402	Nov. 13	Steam tram-cars or locomotives.
Mersanne, F. E. de (Johnson) . .	3315	Aug. 23	Producing electric-light for signalling.
Mesnard, G. H., Sankey, W., & Wil- [son, F.]	2196	May 24	Roller skates.
Messenger, T., & Churchward, G. D.	211	Jan. 19	Steam and other engines.
" T. G.	2994	July 25	Valves for circulation of fluids, &c.
Metcalf, A.	4661	Dec. 1	Mules for spinning.
" J.	1964	May 10	Hot-water boilers.
" W.	3321	Aug. 24	Screens for grates, fire-places, &c.
Metcalf, J., Davies, E., & Hamer, E.	591	Feb. 14	Feeding steam-boilers and raising, &c. w
Meunier, E., & Grün, A. (Johnson) .	2322	June 2	Combing fibres.
Meusel, — (Tongue)	3270	Aug. 19	Obtaining coloring matters from coal.
Mewburn, J. C. (Dinant)	282	Jan. 25	Miners' safety-lamps.
" J. C. (Noiret)	471	Feb. 5	Spinning, twisting, &c.
" J. C. (Wackernie, Maur- [mant, & Tonnel].)	2982	July 24	Throstle-frames.
" J. C. (Dandrieux, Gravier, [& Cie].)	3086	July 28	Flying or aerial toy.
" J. C. (Mathieu)	4547	Nov. 23	Shuttles.
" J. C. (Milsom)	4620	Nov. 29	Unloading grain, &c. from vessels, and weigh [s]
" J. C. (Milsom)	4854	Dec. 15	Ozone machines and ozone.
Meyer, C. H.	938	Mar. 4	Ships' lamps.
" C. J. de Ruidant, A., & Mul- [ders, P. J.]	3726	Sep. 23	Composition or varnish.
Meijer, F. J., & Wernigh, W. . .	807	Feb. 26	Wire cable towing steamer.
" F. J., & Wernigh, W. . .	4457	Nov. 18	Wire cable canal towing steamers.
Meyer, J., & Wallerstein, S. (Lake) .	1140	Mar. 16	Fastenings for wearing-apparel.
" & Geiger (Maschwitz)	4169	Oct. 27	Opening preserved food metal cases, &c.
Maynell, G. C.	782	Feb. 24	Cart and carriage trolley.
Michaelson, M. (Thouvenin & Birn- [bacher, Kuns, & Co.].)	994	Mar. 8	Artificial grinding stone.
Michel, D. (Alexander)	2916	July 17	Removing vegetable substances from tex [fabrics,]
" D. (Alexander)	4580	Nov. 27	Destroying vegetable fibres, in woollen, silk [mixed fabri]
Michele, V. D. de	4922	Dec. 20	Kiln flues for drying cement, slip, or slurr
Michell, F. B.	985	Mar. 7	Stoppering, filling, &c. bottles.
Middlehurst, J.	1253	Mar. 24	Making smoking pipes.
Middleton, E.	3313	Aug. 23	Miners' safety-lamps.
" G. H. & T. C.	2164	May 22	Handles for tea and coffee pots, &c.
" R.	4770	Dec. 9	Stocks employed in making leather, &c.
" T. C. & G. H.	2164	May 22	Handles for tea and coffee pots.
Midgley, D.	409	Feb. 2	Steam-generators.
Mieg, A.	4205	Oct. 31	Aim-taking apparatus for fire-arms.
Mignon, J. B. J., & Rouart, S. H. (John- [son].)	54	Jan. 5	Presses.
Milburn, R., & Jackson, H. . . .	1183	Mar. 20	Drying and concentrating sewage, &c.
Miles, W. A. (Clark)	2654	June 27	Railway wheels.
Millar, J.	3170	Aug. 10	Treating and clarifying sewage.
Miller, A.	1071	Mar. 11	Pump or fluid-drawing, &c. apparatus.
" J.	285	Jan. 25	Producing designs on pottery.

Name.	Number of Application.	Date of Application.	Subject.
Miller, J. (Clark) -	2057	May 16	Making tea, coffee, &c.
Miller, J. F., & Robb, D. -	657	Feb. 17	Making bolts.
" R. J., & Hartshorn, S. -	1888	May 5	Spring-rollers for blinds.
Mills, A. F. -	3220	Aug. 15	Key for tuning pianos, &c.
" B. J. B. (Wardwell) -	66	Jan. 6	Sewing-machines and stands.
" B. J. B. (Hennaman & Brown) -	297	Jan. 25	Making cigars.
" B. J. B. (St. John) -	321	Jan. 26	Sewing-machines.
" B. J. B. (Haughian) -	354	Jan. 28	Compound steel rods, bars, plates, beams, &c.
" B. J. B. (Van den Berghe) -	911	Mar. 3	Casting metals under pressure.
" B. J. B. (Pasquale & Zanini) -	1000	Mar. 8	Steam-engines.
" B. J. B. (Manning) -	1542	Apr. 11	Smoking pipes.
" B. J. B. (Manning) -	1543	Apr. 11	Boots and shoes.
" B. J. B. (Bouscaren) -	1824	May 1	Extracting vegetable juices.
" B. J. B. (Dreyer & Schipmann) -	2324	June 2	Communicating motion to machines.
" B. J. B. (Hardy) -	2626	June 26	Folding stools and tables.
" B. J. B. (Munger) -	2620	July 11	Tank-cans for oil, &c.
" B. J. B. (Poletti) -	2687	July 14	Making bricks, slabs, &c.
" B. J. B. (Macrae) -	3236	Aug. 17	Making fecula, farina and starch.
" B. J. B. (Thiers, Jeffers, Beecher, & Armstrong) -	3585	Sep. 13	Ventilating, disinfecting, and fog-alarm for ships, &c.
" B. J. B. (Astier) -	3846	Oct. 4	Cutting or breaking sugar.
" B. J. B. (Williams) -	3889	Oct. 7	Horse-shoes, horse-shoe blanks; and making [same.]
" B. J. B. (Passenger & Pesinger) -	4194	Oct. 30	Fitting or setting elliptic springs.
" B. J. B. (Clark) -	4244	Nov. 2	Railway rails and producing same.
" B. J. B. (Hoeltge & Hoeltge) -	4305	Nov. 7	Elbows and curved pipes and making same.
" B. J. B. (Haws) -	4792	Dec. 11	Steel converter bottoms and tuyeres and bricks [for same, &c.]
Mills, B. T. (Clark) -	4313	Nov. 7	Gear wheels for shafts.
Mills, D. -	1160	Mar. 17	Sewing, &c. boots and shoes.
" J. -	3278	Aug. 21	Illuminating clock-dials, &c.
" J. -	5054	Dec. 30	Steam-engines.
" R. -	1296	Mar. 25	Hydraulic cranes.
" R. & T. -	3979	Oct. 14	Steam-generators.
" T. -	1349	Mar. 29	Extinguishing fires.
" T. & R. -	3979	Oct. 14	Steam-generators.
Milne, J., & Rattray, W. -	4733	Dec. 7	Making up rolls of tobacco.
Milner, C., & Newell, H. F. -	3075	Aug. 1	Lighting matches.
Milsom, G. (Mewburn) -	4620	Nov. 29	Unloading grain, &c. from vessels and weighing [same.]
" Hannah (Mewburn) -	4854	Dec. 15	Ozone machines and ozone.
Milmore, G. W. (Clark) -	1952	May 9	Railway carriage axles.
Mines et Fonderies de Zinc, La Société [des (Clark)] -	444	Feb. 3	Pulverising ores, &c.
Mirfield, M., & Scott, J. -	479	Feb. 5	Combing fibres.
Mirfin, W. H. -	1784	Apr. 27	Steam-boilers.
Mitchell, C. P. -	1463	Apr. 5	Treating jute.
" C. R. -	3632	Sep. 16	Fishing gear winch.
" J. -	4345	Nov. 9	Coal-getting apparatus.
" J. -	4639	Nov. 30	Railway and other carriage springs.
Mitchell, J. C., & Roby, C. W. (Johnson) -	2845	July 12	Railway couplings.
Mitchell, J. I. -	3577	Sep. 12	Carriages propelled by manual labour.
" M. & T. -	1924	May 8	Safety-valves and low-water indicator.
" N. W. -	1752	Apr. 26	Hat and bonnet shapes.
" P., & Rutherford, W. -	4474	Nov. 18	Gripping tongs or "reachers."
" Thomas -	1511	Apr. 10	Steam-pipe, &c. for heating.
" Thomas -	3548	Sep. 9	Umbrellas.
" Thomas & M. -	1924	May 8	Safety-valves and low-water indicator.
" Tom -	4366	Nov. 11	Spinning.
" W., & Caines, C. E. -	154	Jan. 14	Braces for trousers, &c.
Mitford, W., & Lester, R. -	4802	Dec. 12	Making puddled steel or iron.
Mitter, M. G., & Weisenfeld, C. L. (Abel) -	4215	Oct. 31	Metal plates for bearing loads.
Mittner, J. A., & Lüders, R. (Haddan) -	3175	Aug. 11	Looms.

Name.	Number of Application.	Date of Application.	Subject.
Mohr, F. W. B. - - - - -	2147	May 20	Treating spent oxide of iron to obtain products.
Molesworth, J. E. - - - - -	818	Feb. 28	Applying electricity for disinfecting, &c.
Moleux, A. - - - - -	450	Feb. 4	Illuminating projectiles used for saving life.
Molin, E. (Johnson) - - - - -	4870	Dec. 16	Manufacture of bobbin-net lace.
Monck, F. W. - - - - -	1078	Mar. 11	Copying manuscripts, &c. and affixing stamps.
Monckton, E. H. C. - - - - -	2793	July 8	Preparing medicines.
" E. H. C. - - - - -	2827	July 11	Motive-power.
" E. H. C. - - - - -	2833	July 12	Rails and railways.
" E. H. C. - - - - -	4597	Nov. 28	Generating and applying electricity; motive-power.
Monckton, E. H. C. (Downing) - - -	2522	June 17	Treating vegetable fibres and applying same.
Mondon, M. - - - - -	4823	Dec. 13	Cutting files.
Monjot, J. - - - - -	1392	Mar. 31	Looms.
Monmon, F. H., & Appel, F. (Day) -	3540	Sep. 8	Printing in various colors.
Monnin, C. F. Dietz- (Alexander) -	1091	Mar. 13	Pocket-alarms.
Mont, H. D. du (Alexander) - - -	4363	Nov. 11	Paving roads, &c. and treating wood.
Montague, W. - - - - -	3331	Aug. 24	Dress-suspender.
Montalbo, J. M. de la Torre y (De Aragon)	4199	Oct. 30	Hand and sewing-machine needles.
Monteith, J. - - - - -	2436	June 13	Velocipedes.
" J. - - - - -	2708	July 1	Rotary-engines.
Montejo, U. - - - - -	4991	Dec. 23	Lighting cigars and cigarettes.
Montgomery, A. (Tongue) - - - -	4272	Nov. 4	Jars, bottles, flasks, &c.
" A. (Tongue) - - - - -	4612	Nov. 29	Preserving, storing, and transporting perishable articles.
" A. (Tongue) - - - - -	5038	Dec. 29	Fast and loose pulleys.
Montmagnon, H. (Lake) - - - - -	1256	Mar. 24	Combustible compounds, &c. for producing gas.
Montoison, J. L. de - - - - -	4505	Nov. 21	Utilising scrap, old, and waste leather.
Moody, J. M., Slade, W. B. M., & Haynes, T. H. (Howe Spring Bed Co.)	4882	Dec. 18	Spring-mattresses.
Mooij, C. de (Newton) - - - - -	2636	June 26	Suspending hammocks, cots, &c.
Moore, De la M. - - - - -	1162	Mar. 18	Steam-boilers.
" F. - - - - -	3356	Aug. 26	Solitaires, sleeve-links, &c.
" H. - - - - -	522	Feb. 9	Anti-friction rollers for bearings.
Moore, James C. (Lake) - - - - -	1535	Apr. 11	Spittoons or cuspadores.
Moore, John - - - - -	246	Jan. 21	Relieving pressure in gas retorts.
" John B. - - - - -	4377	Nov. 11	Moulding, &c. substances for confectionery.
" Joseph - - - - -	98	Jan. 8	Heating and warming rooms, &c.
Moorhouse, J. (Edwards) - - - - -	2068	May 16	Steam-engines.
Morce, J. E. - - - - -	3201	Aug. 14	Candles to dispense with " save-alls."
Morel, S. J. C., Ferrando- (Bousfield)	1691	Apr. 21	Sawing timber.
Morewood, E. - - - - -	1694	Apr. 21	Coating metals.
" E. - - - - -	1696	Apr. 21	Coating metals.
Morfit, C. - - - - -	897	Mar. 2	Portable and condensed food.
Morgan, E. - - - - -	2398	June 8	Treating milk for making milk powder.
" E. E., Richards, D., & Morris, [E. S.]	2611	June 24	Tempering sheet-iron plates.
" G. H. - - - - -	4216	Oct. 31	Carriages.
Morgan, G. H. (Newton) - - - - -	279	Jan. 24	Type-writers.
" J. (Hart) - - - - -	1678	Apr. 21	Gas-meters.
Morgan, J. C., Macaulay, H., & Waide, [F. W.]	178	Jan. 17	Fire-places, stoves, &c.
" T. (Sheffield, Fanning, & Kalb- [Fleisch].)	2722	July 1	Boots and shoes; uniting leather, &c.
" T. (Birch) - - - - -	2892	July 14	Watch-keys.
" T. (Massey & Petty) - - - - -	3271	Aug. 19	Steam-engines.
" T. (Gloym) - - - - -	3364	Aug. 26	Floor-covering.
" T. (Pierce) - - - - -	3449	Sep. 1	Rotary steam-boilers.
" T. (Sheffield, Kalbfleisch, & [Fanning].)	3437	Aug. 31	Sewing-machines for leather, &c.
" W. - - - - -	1491	Apr. 7	Boots and shoes.
" W. - - - - -	4534	Nov. 22	Hats.
Morgan-Brown, W. (Matute) - - - -	58	Jan. 6	Indexing and binding books.
" W. (Savage) - - - - -	271	Jan. 24	Metallurgical furnaces.

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APPLICANTS FOR PATENTS FOR THE YEAR 1876.

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	Name.	Number of Application.	Date of Application.	Subject.
122	Morgan-Brown, W. (<i>Simmons & Har-</i> <i>robin</i>).	811	Jan. 26	Cop-tubes.
123	" W. (<i>Bigelow</i>) - - -	868	Feb. 17	Uniting edges of knit goods, &c.
124	" W. (<i>Doty</i>) - - -	893	Mar. 2	Lamp-burners.
125	" W. (<i>Du Laney</i>) - - -	1137	Mar. 16	Sewing-machines.
126	" W. (<i>Sainsbury</i>) - - -	1186	Mar. 20	Hardening wood.
127	" W. (<i>Drucker</i>) - - -	1239	Mar. 23	Braces or suspenders.
128	" W. (<i>Bigelow</i>) - - -	1337	May 28	Seams or gorings for shoes, &c.
129	" W. (<i>Richardson</i>) - - -	1383	Mar. 31	Playing cards.
130	" W. (<i>Johnson</i>) - - -	1563	Apr. 13	Locomotive-engines.
131	" W. (<i>Barlow</i>) - - -	1654	Apr. 20	Ornamental textile fabrics.
132	" W. (<i>Glisenti</i>) - - -	1671	Apr. 21	Fire-arms.
133	" W. (<i>Chanoit</i>) - - -	2000	May 12	Filtering reservoir.
134	" W. (<i>Duroux</i>) - - -	2001	May 12	Purifying turpentine spirit.
135	" W. (<i>Behr & Lippert</i>)	2050	May 16	Self-closing valves.
136	" W. (<i>Crompton</i>) - - -	2262	May 30	Fancy looms.
137	" W. (<i>Hotchkiss</i>) - - -	2410	June 10	Metallic cartridges.
138	" W. (<i>Russell</i>) - - -	2426	June 12	Pasting labels on cans and boxes.
139	" W. (<i>Crowell</i>) - - -	2457	June 14	Folding and delivering paper.
140	" W. (<i>Glaçon</i>) - - -	2631	June 26	Wire-drawing apparatus.
141	" W. (<i>Chapman</i>) - - -	2683	July 14	Making envelopes.
142	" W. (<i>Hotchkiss</i>) - - -	2952	July 20	Projectiles for ordnance.
143	" W. (<i>de Torres</i>) - - -	2968	July 21	Injector for steam-boilers.
144	" W. (<i>Ducos-Duhauvon</i>)	2973	July 22	Photography in colours.
145	" W. (<i>Weare & Weare</i>)	3137	Aug. 8	Cooking-utensils.
146	" W. (<i>Kunkler</i>) - - -	3243	Aug. 17	Varnishes and applying same.
147	" W. (<i>Koll</i>) - - -	3305	Aug. 23	Steam-boilers.
148	" W. (<i>Viglino & Donna</i>)	3443	Sep. 1	Hydro-piro-pneumatic pump.
149	" W. (<i>Fouillet</i>) - - -	3659	Sep. 19	Looms for pleating and diapering cloth, &c.
150	" W. (<i>Mann</i>) - - -	3956	Oct. 13	Marine danger signal.
151	" W. (<i>Vanstone & Hoard</i>)	4010	Oct. 17	Blanks for screws and threaded nails.
152	" W. (<i>Hancock</i>) - - -	4078	Oct. 21	Injectors or inspirators.
153	" W. (<i>Maurel & Truel</i>)	4617	Nov. 29	Safety-valves.
154	" W. (<i>Bell</i>) - - -	4765	Dec. 9	Electric telephony or sound telegraphs.
155	" W. (<i>Sawyer</i>) - - -	4766	Dec. 9	Mules or jacks for spinning.
156	" W. (<i>Hornbostel</i>) - - -	5007	Dec. 28	Preparing, &c. oxygenated air for combustion.
157	" W. (<i>Myers</i>) - - -	5014	Dec. 28	Wash-basins, urinals, sinks, &c.
158	Morgans, W. - - -	369	Jan. 29	Agricultural and mining tools, &c.
159	Morison, A. J. (<i>Morison</i>) - - -	2089	May 17	Evaporating and purifying liquids.
160	Morison, F. J. (<i>Morison</i>) - - -	2089	May 17	Evaporating and purifying liquids.
161	Morison, J. A. R. - - -	309	Jan. 26	Skating rink floors.
162	" J. A. R. - - -	1608	Apr. 15	Rink skates.
163	Moritz, P. - - -	4636	Nov. 30	Electric night signal apparatus.
164	Morlet, C. (<i>Herzog</i>) - - -	3285	Aug. 22	Watches.
165	Morley, S. - - -	2383	June 7	Water-gauges and cocks.
166	Morrell, W. N. - - -	1741	Apr. 25	Carriage axles and bushes for same.
167	Morris, A. (<i>Brewer</i>) - - -	796	Feb. 25	Pump.
168	Morris, E. E. - - -	338	Jan. 28	Base for fixing stereo-plates.
169	" E. L. - - -	1471	Apr. 6	Targets.
170	" E. S., Morgan, E. E., & [Richards, D.]	2611	June 24	Tempering sheet-iron plates.
171	" I. - - -	4555	Nov. 24	Paving bricks or quarries.
172	" J. - - -	997	Mar. 8	Making tiles.
173	" J., & Westley, J. - - -	1059	Mar. 11	Steam-boiler injectors.
174	" W. - - -	1615	Apr. 18	Establishing communication with pipes under [pressure.]
175	Morrison, H. A., & Valentine, A. A. (<i>Lake</i>)	4719	Dec. 6	Umbrellas, parasols, sunshades, &c.
176	Morrison, J. B. & W. - - -	2327	June 2	Hauling and working fishing nets.
177	" W. & J. B. - - -	2327	June 2	Hauling and working fishing nets.
178	Mort, T. S., & Nicolle, E. D. (<i>Mort</i>)	1208	Mar. 21	Refrigerating and purifying air, liquids, &c.
179	Mort, W. (<i>Nicolle & Mort</i>) - - -	1208	Mar. 21	Refrigerating and purifying air, liquids, &c.
180	Morton, F. G. - - -	3346	Aug. 25	Treating paraffine and other fats.
181	" F. G. - - -	3836	Oct. 4	Treating paraffine and other fats.

Name.	Number of Application.	Date of Application.	Subject.
Morton, James	2748	July 5	Preparing fabrics and yarns for dyeing, &c.
" John	3404	Aug. 29	Sewing-machine winders and shuttles.
" John	4881	Dec. 14	Sewing-machine shuttles.
" John W. (Preston)	220	Jan. 19	Washing clothes, &c.
" Joseph, & Walker, T.	236	Jan. 20	Brace-buckles.
" R.	1283	Mar. 25	Whipping or churning liquids, &c.
Morton, T. (Clark)	55	Jan. 5	Chains for hanging sashes, doors, &c.
Moschowitz, H. (Clark)	3828	Aug. 24	Starting gear for tram-cars, &c.
Moseley, C.	1501	Apr. 8	Waterproof packing.
" C.	1502	Apr. 8	Apparatus for inflammable oils.
" J.	4862	Dec. 22	Foundations of wire cards.
" W.	1097	Mar. 13	Signalling apparatus for ships, &c.
" W., & Ashcroft, J.	2263	May 30	Marking billiard and other games.
Moselli, O. (Bonneville)	4276	Nov. 6	Fire-arms.
Moser, A.	4289	Nov. 6	Telescopes used in measuring angles.
Mosley, A.	4080	Oct. 18	Twist lace machines; making imits [" guipe
Mosquera, J. A. (Clark)	2739	July 4	Coffee-pulping machine.
Moss, G., & Ketley, J.	2659	June 28	Sewing-machines and shuttles for same.
" J., & Murry, G. O.	3758	Sep. 26	Fire-escapes and ladders.
Motherwell, J.	3357	Aug. 26	Combined pen and holder.
Motion, R.	4481	Nov. 20	Washing-machine.
" R.	4544	Nov. 23	Winding yarns into cops upon pirns.
Motte, F. (Lake)	988	Mar. 7	Crushing-machine.
Mottie, L.	201	Jan. 18	Treating tobacco.
Motz, W., & Laporte, J. (Hughes)	1605	Apr. 15	Feeding steam-boilers.
Mouchot, A. B. (Cordier)	4940	Dec. 21	Utilising sun's rays for heating purposes.
Moulin, F., & Felia, J. (Newton)	3083	July 27	Burning noxious gases, &c.
Moulton, G.	4170	Oct. 27	Engraving, milling, or chasing rollers.
Mounie, Baron T. de	3206	Aug. 14	Revolving-pistols.
" Baron T. de	4163	Oct. 26	Revolving-pistols.
Mountain, B. & J.	1819	May 1	Making cut-nails, sprigs, &c.
" B. & J.	3744	Sep. 25	Heading nails and tacks.
" James & B.	1819	May 1	Making cut-nails, sprigs, &c.
" James & B.	3744	Sep. 25	Heading nails and tacks.
" John	3484	Sep. 4	Sewing-machines.
Muchin, M. K. (Jensen)	2891	July 14	Brick and tile-making machines.
" M. K. (Jensen)	2904	July 15	Preparing fibres.
Muir, A., & Beeley, T.	318	Jan. 26	Metal plates, bars, and rings.
" W.	4813	Dec. 13	Winding-machines.
" W.	4814	Dec. 13	Loom shedding mechanism.
Muirhead, A., & Muirhead, J.	2564	June 21	Electric-telegraphs.
Muirhead, J. (Warden)	1951	May 9	Igniting and extinguishing gas lamps.
" J., & Muirhead, A.	2564	June 21	Electric-telegraphs.
Mulders, P. J., De Meyer, C. J., & Ruidant, A.	3726	Sep. 23	Composition or varnish.
Mulholland, J. R. T., & Porter, W. M.	4144	Oct. 25	Winding-machines for making pirns.
Muller, A. J. M. de	2413	June 10	Tempering and toughening bottles, &c.
Müller, F. R.	4604	Nov. 28	Splitting or chopping wood, &c.
" J.	4197	Oct. 30	Clasp for albums, books, &c.
Muller, J. A.	1783	Apr. 27	Making gas and fuel.
Müller, M. L.	1670	Apr. 21	Composing type.
Mullin, J., & Beresford, H.	1385	Mar. 31	Mules.
Mulliner, F.	404	Feb. 1	Wheel tyres.
Mullord, A.	501	Feb. 8	Satinizing paper.
Munger, C. A. (Mills)	2820	July 11	Tank-cans for oil, &c.
Munro, A. & B., & Dunlop, A.	142	Jan. 13	Cutting, shaping, and polishing stone, &c.
" B. & A., & Dunlop, A.	142	Jan. 13	Cutting, shaping, and polishing stone, &c.
Munslow, W.	1799	Apr. 28	Washing "peggy tub," &c.; churning.
Münts, A., & Ramsbacher, T. (Martin)	1673	Apr. 21	Urinals.
Muratori, C.	1121	Mar. 15	Paint.
" C.	3470	Sep. 2	Waterproofing materials; paving and like.
Murdoch, H. H. (Haggenmacher)	53	Jan. 5	Winnowing, sorting, &c. corn and seeds.

Name.	Number of Application.	Date of Application.	Subject.
Murdoch, H. H. (<i>Barrault</i>) - - -	240	Jan. 20	Sugar-making.
„ H. H. (<i>Borgnet & Demanet</i>) - - -	860	Feb. 29	Combustion of solids, gases, &c.
„ H. H. (<i>Putnam</i>) - - - - -	978	Mar. 7	Making fence wire.
„ H. H. (<i>Kirkpatrick</i>) - - - -	3539	Sep. 8	Steam-boilers.
„ H. H. (<i>Béle</i>) - - - - -	3690	Sep. 20	Sugar-making.
„ W., Ault, H. H., & Knowles, W. - -	330	Jan. 27	Anti-incrustation composition.
Mure, A. H. - - - - -	2201	May 25	Vent-pegs.
Murgatroyd, J., Rothwell, W., Bat- [inson, A., Sutcliffe, W.	1861	May 3	Weaving.
Murisier, L., Perret, P. A., & Gervais, [A. (Clark).	2058	May 16	Camp kettles.
Murison, F. - - - - -	4183	Oct. 28	Plough.
Murphy, A. A. (Reynolds) - - - -	572	Feb. 12	Extinguishing fires.
„ F. (Lake) - - - - -	1080	Mar. 11	Ventilating mines.
Murphy, B. - - - - -	4378	Nov. 11	Threading needles.
„ W. H. - - - - -	3606	Sep. 14	Paper barrels or packages.
„ W. H. - - - - -	3672	Sep. 19	Head for paper barrels.
Murray, C. H. - - - - -	3049	July 29	Pressing or embossing bricks, &c.
„ G., & Turnley, R. - - - -	4092	Oct. 23	Locking nuts on bolts.
„ W. M., & Bartlett, J. - - -	3165	Aug. 10	Making type.
Murry, G. O., & Moss, J. - - - -	3758	Sep. 26	Fire-escapes and ladders.
Musgrave, J., & Smith, A. - - -	1972	May 10	Steam-engines.
„ J., & Chell, P. - - - -	2085	May 17	Steam-engines.
Musy, L., & Granjon, J. B. (Imray) -	2726	July 3	Support for railway travellers.
Myers, A. G. (Morgan-Brown) - - -	5014	Dec. 28	Wash-basins, urinals, sinks, &c.
Myers, F. G. - - - - -	3860	Oct. 6	Punching and eyeletting leather.

N.

Nadin, H. T. - - - - -	4387	Nov. 11	“Billy fair play” machines for weighing coal.
Nash, Elizabeth, & Tytherleigh, W. -	545	Feb. 10	Skates.
„ H., & Smith, E. - - - - -	1774	Apr. 27	Uniting tin and terne plates.
„ T. L. - - - - -	3229	Aug. 16	Animal trap.
Nast, W. F. - - - - -	2784	July 6	Treating manure; making paper.
Nation, W. B., & Symington, W. - -	3679	Sep. 20	Treating paraffine.
Nawrocki, G. W. von (<i>Neumann</i>) - -	2687	June 29	Hardening steel plates; safes.
„ G. W. von (<i>Asbeck, Osthaus,</i> [<i>Eicken, & Co.</i>).	2689	June 29	Armour-plates.
„ G. W. von (<i>Asbeck, Osthaus,</i> [<i>Eicken, & Co.</i>).	2704	July 1	Uniting iron and steel.
„ G. W. von (<i>Brumley</i>). - - - -	4418	Nov. 15	Sulphuric and other mineral acids.
„ G. W. von (<i>Körting</i>) - - - -	4420	Nov. 15	Sugar-making.
„ G. W. von (<i>Drossbach</i>) - - -	4394	Nov. 13	Preparing flax, hemp, jute, &c.
„ G. W. von (<i>Goliusch</i>) - - - -	4660	Dec. 1	Pocket-lantern.
„ G. W. von (<i>Heinemann</i>) - - -	4965	Dec. 23	Bevil tenon cutting machine.
„ G. W. von (<i>Bernstein</i>) - - -	4981	Dec. 23	Scales for testing coins by weight.
Nawrocki, G. W. von, & Brandt, J. [(Jensen).	1810	Apr. 29	Galvanic-batteries.
Naylor, J., & Kitson, A. - - - -	4581	Nov. 27	Railway couplings.
Neale, J. (<i>Armengaud</i>) - - - - -	1103	Mar. 14	Sulphuric acid.
„ M. T. - - - - -	3102	Aug. 3	Harvesting-machines.
Needham, J. - - - - -	2300	May 31	Portable fountains.
Needle Co., Cook & Porter (Hughes) -	792	Feb. 25	Needle machines.
Neer, C. - - - - -	2538	June 19	Regulating speed of propellers, &c.
Negretti, H., & Zambra, J. W. - -	1868	May 3	Hydrometers.
Neil, J., Batley, J., & Keats, J. - -	4076	Oct. 21	Boots and shoes and lasting, &c. same.
Neilson, A., & Young, A. & W. - -	3894	Oct. 9	Distilling bituminous substances.
Nelson, G. W. (Clark) - - - - -	1425	Apr. 3	Making cakes.
Nelson, J. W., & Barnett, E. - - -	1375	Mar. 30	Roller skates.
„ L. (Mallory) - - - - -	3704	Sep. 21	Making paper bags.

Name.	Number of Application.	Date of Application.	Subject.
Nelson, W.	2852	July 13	Pencil and pen-holder.
" W.	4927	Dec. 21	Studs for fastening gloves, shirt-fronts, &c.
" W., & Glazebrook, I.	2042	May 15	Rink and parlour skates.
Nesbitt, G.	3644	Sep. 18	Photograph tinting apparatus.
Neuerburg, M. (Wirth)	2406	June 9	Screen for sorting minerals, &c.
Neumann, G. H. (Weaver)	3741	Sep. 25	Boring or drilling rocks, &c.
" H., & Hansmann, J.	3621	Sep. 15	Artificial school slates.
Neumann, R. (von Nawrocki)	2667	June 29	Hardening steel plates; safes.
Neupert, E.	276	Jan. 24	Buttons.
Nevill, W. H.	1242	Mar. 23	Treating cinders for iron furnaces.
Neville, S.	126	Jan. 12	Frames for cruetts and other bottles.
" T., & Breffit, E.	791	Feb. 25	Bottle-stoppers.
Newall, R. S.	3637	Sep. 16	Grinding corn, &c.
" R. S.	4287	Nov. 6	Wire-rope.
Newbold, H.	2438	June 13	Counting persons entering and passing places.
Newell, H. F., & Milner, C.	3075	Aug. 1	Lighting matches.
Newlands, B. E. R., & Duncan, J.	2685	June 29	Treating and purifying sugar, &c.
" B. E. R. & J. A. R., & [Duncan, J.]	2690	June 30	Sulphate of alumina.
" B. E. R. & J. A. R., & [Duncan, J.]	2707	July 1	Sulphate of alumina.
" J. A. R. & B. E. R., & [Duncan, J.]	2690	June 30	Sulphate of alumina.
" J. A. R. & B. E. R., & [Duncan, J.]	2707	July 1	Sulphate of alumina.
Newman, J., & Whittle, W.	891	Mar. 2	Coating light metallic articles.
Newsome, W.	406	Feb. 1	Signalling to trains.
Newton, A. V. (Essex)	199	Jan. 18	Cop-tubes.
" A. V. (Huntington & Hempstead).	202	Jan. 18	Liquid-meters.
" A. V. (Morgan)	279	Jan. 24	Type-writers.
" A. V. (Babbitt)	303	Jan. 25	Steam-boilers and furnaces.
" A. V. (Jenkins)	352	Jan. 28	Sewing-needles.
" A. V. (Andrews)	506	Feb. 8	Centrifugal pumps.
" A. V. (Graham)	975	Mar. 6	Brick-making.
" A. V. (Bernstein)	1351	Mar. 29	Assorting coin.
" A. V. (Purvis)	1620	Apr. 18	Engine valves.
" A. V. (Good)	2276	May 30	Spreading, drawing, &c. fibres.
" A. V. (Good)	2369	June 6	Heckling fibres.
" A. V. (Huntington & Hempstead).	2685	June 26	Liquid-meters.
" A. V. (Whitehill)	3702	Sep. 21	Sewing-machines and attachments.
" A. V. (Garrison)	4523	Nov. 21	Air-pumps.
" A. V. (Campbell)	4644	Nov. 30	Delivery apparatus for printing-presses.
" E.	2125	May 19	Frame-saws.
" G.	824	Feb. 23	Lubricant.
" H. E. (Schönherr)	122	Jan. 11	Looms.
" H. E. (Roser)	200	Jan. 18	Steam-boilers.
" H. E. (Parrott)	647	Feb. 16	Projectiles for ordnance.
" H. E. (Macbay)	776	Feb. 24	Converting fibrous substances into substitutes [for wood, &c.]
" H. E. (Angot)	1006	Mar. 8	Constructing merchant ships.
" H. E. (Van der Haeghen [Limelette]).	1068	Mar. 11	Vitreous colours.
" H. E. (Malen)	1138	Mar. 16	Obtaining extracts, &c.
" H. E. (Fryer)	1519	Apr. 10	Pulverising ores and amalgamating metals.
" H. E. (Lambot & Vandermet)	1541	Apr. 11	Revivifying charcoal.
" H. E. (Deboutterville)	1702	Apr. 21	Threads or yarns.
" H. E. (Hannan)	1841	May 2	Printers' galleys.
" H. E. (Wiles & Adams)	1971	May 10	Ironing-machines.
" H. E. (Wiles & Adams)	1987	May 11	Starching textile substances.
" H. E. (Delamare)	2016	May 13	Removing substances from textile fabrics.
" H. E. (Brown & Brothers)	2165	May 22	Table forks and spoons.

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Newton, H. E. (<i>Eager</i>) - - - - -	2303	May 31	Pantaloon, &c.
" H. E. (<i>Schmetzer</i>) - - - - -	2485	June 14	Toy figures.
" H. E. (<i>Nobel</i>) - - - - -	2479	June 15	Preserving meat and fish.
" H. E. (<i>Steele</i>) - - - - -	2594	June 23	Marine-engine governors.
" H. E. (<i>De Mooij</i>) - - - - -	2636	June 26	Suspending hammocks, cots, &c.
" H. E. (<i>Decauville</i>) - - - - -	3020	July 26	Portable railways and rolling-stock, &c. for same.
" H. E. (<i>Dedieu</i>) - - - - -	3159	Aug. 9	Stocking-supporter.
" H. E. (<i>Rousseau</i>) - - - - -	4117	Oct. 24	Obtaining pictures in colours.
" H. E. (<i>Lucas, Prince, & [Edwards]</i>) - - - - -	4308	Nov. 7	Egg-boxes or cases.
" H. E. (<i>Boucher</i>) - - - - -	4310	Nov. 7	Substitute for the slide-rule.
" H. E. (<i>Labarthe, Guillemare, [Pallas]</i>) - - - - -	4369	Nov. 11	Lamps.
" H. E. (<i>Menier</i>) - - - - -	4705	Dec. 5	Telegraphic and other conductors.
" H. R. - - - - -	1569	Apr. 13	Supplying water to, and discharging and separating waste waters from houses, &c.; locking apparatus therefor and constructing drains, sewers, and connections therefor.
Newton, S. S. (<i>Doubleday</i>) - - - - -	2929	July 18	Stopper for bottles, cans, &c.
Newton, W. E. (<i>Jenney</i>) - - - - -	1973	May 11	Treating refuse from distillation of petroleum [&c. for products.
" W. E. (<i>Jenney</i>) - - - - -	2339	June 3	Treating refuse from distillation of petroleum [&c. for products.
" W. E. (<i>Hoe</i>) - - - - -	2419	June 12	Preparing paper webs for printing.
" W. E. (<i>Felix & Moulin</i>) - - - - -	3033	July 27	Burning noxious gases &c.
" W. E. (<i>Lenoir</i>) - - - - -	3691	Sep. 20	Railway sleepers.
Newton, W. H. (<i>Lake</i>) - - - - -	1814	Apr. 29	Dredging by hydraulic power.
Neyret, J., & Treymous, F. (<i>Clark</i>) - - - - -	1196	Mar. 20	Air and water-proof fabrics.
Nezeraux, P. (<i>Johnson</i>) - - - - -	2755	July 5	Balances for indicating weight, &c.
Nicholl, J. J. - - - - -	1393	Mar. 31	Suspension hooks.
Nicholls, J. R. - - - - -	4649	Nov. 30	Receptacles for "workings" in fining beer.
" M. L. - - - - -	4524	Nov. 21	Preventing locomotives running off rails.
" R. - - - - -	1216	Mar. 22	Measuring the human foot.
Nicholson, H. - - - - -	2885	July 14	Forks.
Nicoll, D. - - - - -	878	Mar. 1	Capsules for containing food, &c.
Nicolle, E. D., & Mort, T. S. (<i>Mort</i>) - - - - -	1208	Mar. 21	Refrigerating and purifying air, liquids, &c.
Nicolson, D., & Wilson, R. - - - - -	3303	Aug. 23	Hydraulic-presses.
Niebuhr, J. F. W. - - - - -	683	Feb. 18	Gas-making.
Niedringhaus, F. G. & W. F. (<i>Lake</i>) - - - - -	2453	June 14	Enamelling iron.
" W. F. & F. G. (<i>Lake</i>) - - - - -	2453	June 14	Enamelling iron.
Nishigawa, T. M. - - - - -	813	Feb. 26	Making ice for skating rinks, cooling, &c.
" T. M., & Hill, F. B. - - - - -	1317	Mar. 27	Gas-engines.
" T. M., & Hill, F. B. - - - - -	3427	Aug. 31	Ice-making; cooling & refrigerating liquids, &c.
Nixon, C. N. - - - - -	3810	Oct. 2	Pinions and wheels, and pawling same.
" T. - - - - -	364	Jan. 29	Pentagraph engraving machine.
Noad, J. - - - - -	1750	Apr. 26	Applying wood-fibre and wood-pulp.
Nobbs, J. H. - - - - -	1928	May 8	Velocipedes.
Nobel, A. (<i>Newton</i>) - - - - -	2479	June 15	Preserving meat and fish.
Noble, L. P. - - - - -	2272	May 30	Wheel or roller skates.
Noble, O. Le G., & Prosser, T. T. (<i>Lake</i>) - - - - -	1105	Mar. 14	Pegging boots, &c.; wire pegs.
Noiret, H. (<i>Mewburn</i>) - - - - -	471	Feb. 5	Spinning, twisting, &c.
Nokes, W. - - - - -	4116	Oct. 24	Ornamental strips, rods and tubes.
Nolden, M. (<i>Johnson</i>) - - - - -	273	Jan. 24	Purifying water.
Nolet, P. - - - - -	1198	Mar. 21	Working telegraphic lines.
Nolf, E. B. (<i>Clark</i>) - - - - -	4983	Dec. 22	Dressing and moulding stone.
Noll, W. - - - - -	3114	Aug. 4	Tapping and drawing off fluids from casks.
Nollen, G. (<i>Wirth</i>) - - - - -	4371	Nov. 11	Controlling hade or dip of borings in tunnel [ling, &c.
Norcombe, E. S. - - - - -	182	Jan. 18	Setting, &c. sewing-machine needles.
" E. S. - - - - -	1167	Mar. 18	Setting, &c. sewing-machine needles.
Nordenfelt, T. (<i>Palmerantz</i>) - - - - -	874	Mar. 1	Gun-carriages.
" T. (<i>Ancarkrona</i>) - - - - -	875	Mar. 1	Sewing-machine shuttles.
" T. (<i>Brunius</i>) - - - - -	4084	Oct. 23	Electric railway signalling.

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Normandy, A. L. - - - - -	4939	Dec. 21	Distilling apparatus and working same.
Normanville, W. de - - - - -	2589	June 23	Ships' logs or speed-indicators.
Norrie, J. S. - - - - -	2295	May 31	Floor-cloth, roof, &c. covering.
Norris, G. S. - - - - -	4538	Nov. 22	Removing dust from carpets.
North, J. - - - - -	2430	June 12	Steam-pumps.
Northcote, G. B. - - - - -	1159	Mar. 17	Charging, turning, &c. cartridges.
" G. B. - - - - -	2061	May 16	Making wafers.
" G. B. - - - - -	2867	July 13	Washing-stand wall-protector.
" G. B. - - - - -	2868	July 13	Cutting grass-plot edges.
Northeroft, G. - - - - -	1706	Apr. 22	Fire-resisting floors and roofs.
Notré, E. P. (Johnson) - - - - -	3257	Aug. 19	Food-safes.
Nouffard, L. E. (Ledger) - - - - -	3241	Aug. 17	Steam-boiler registers.
Nowakowski, S., & Baranowski, J. J. - - - - -	2604	June 24	Roller skates.
Nowell, J., & Burden, G. T. - - - - -	4095	Oct. 23	Liquid-meters.
Nugent, R. C. (Abel) - - - - -	187	Jan. 18	Flanging boiler-heads, &c.
" R. C. (Abel) - - - - -	381	Jan. 31	Flanging holes in metal plates.
Nurse, G. - - - - -	2055	May 16	Treating tin andterne plates.
Nussey, G. H., & Leachman, W. B. - - - - -	242	Jan. 21	Pressing woven, &c. fabrics.
" G. H., & Beaumont, W. E. - - - - -	1742	Apr. 25	Weaving patterns on tweeds.
Nuttall, F. D. - - - - -	1406	Apr. 1	Glass-tank furnaces.
O.			
Oakeshott, R. S. - - - - -	5037	Dec. 29	Stoves.
Oats, R. C. - - - - -	1834	May 2	Reaping-machine attachments.
O'Callaghan, E. - - - - -	907	Mar. 3	Constructing buildings.
O'Connor, P. - - - - -	3433	Aug. 31	Door and gate hinges.
Oexle, O. (Johnson) - - - - -	2113	May 18	Grinding corn.
Offord, J. - - - - -	1008	Mar. 8	Opening, &c. carriage heads.
Ogden, P. & R. - - - - -	1947	May 9	Roller skates.
" R. & P. - - - - -	1947	May 9	Roller skates.
Ogilvie, T. R. & Scott, A. - - - - -	1054	Mar. 11	Purifying sugar.
O'Hanlon, W. - - - - -	2696	June 30	Counterpanes and quilts and weaving same.
O'Lawlor, L. de Bejar y, & Calvo, N. A. - - - - -	1303	Mar. 27	Electric-telegraphy.
Olcott & Dodge (Ashmore) - - - - -	1106	Mar. 14	Baking-powders.
Oldfield, J. - - - - -	4534	Nov. 23	Belts, bands, straps, harness, &c.
Oldham, C., & Sharples, J. J. - - - - -	1780	Apr. 27	Looms.
Oliver, E. (Knee) - - - - -	1567	Apr. 13	Disinfectants; treating fibrous materials to [prevent decay, &c.]
Oliver, H. W. (King) - - - - -	3772	Sep. 28	Tie-buckles.
Oliver, W., & Owen, C. T. - - - - -	147	Jan. 13	Motive-power engines; power-breaks & hoist.
Oliver, W. S. (Johnson) - - - - -	4607	Nov. 28	Military and other accoutrements.
Olver, W. H. - - - - -	2464	June 14	Toggle or fastener for ships' sails, &c.
Onderdonk, J. P. - - - - -	1197	Mar. 20	Coverings for umbrellas, &c.
O'Neill, A. - - - - -	4380	Nov. 11	Pipe-joints.
" A. - - - - -	4381	Nov. 11	Constructing and laying water mains.
" S. - - - - -	1675	Apr. 21	Weaving.
Onion, W. - - - - -	3811	Oct. 2	Making fashioned hosiery.
Oosterwyck, J. B. van - - - - -	3118	Aug. 5	Elevating liquids.
Oppenheimer, D. (Vuillard) - - - - -	291	Jan. 25	Smoking pipes and tubes.
" J. - - - - -	4049	Oct. 19	Pendulums for time-keepers.
Orchar, R., Martin, W., & Dawson, [D. R.] - - - - -	1909	May 6	Sewing-machines.
Ormesher, J. & W., Brown, S., & [Mather, S. H.] - - - - -	3787	Sep. 28	Removing soot, &c. from steam-boiler flues.
" W. & J., Brown, S. & [Mather, S. H.] - - - - -	3787	Sep. 28	Removing soot, &c. from steam-boiler flues.
Ormond, A., & Briscoe, R. M. - - - - -	2557	June 20	Military saddles.
Orr, J. B. - - - - -	3731	Sep. 25	Treating fabrics, &c. dyed with aniline black.
Orrah, A., Brown, J., & Dean, W. - - - - -	1118	Mar. 15	Cutting pile fabrics.
" A., Brown, J., & Dean, W. - - - - -	4136	Oct. 20	Drawing, twisting, &c. fibres.

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Ortmans, V. C. J.	2166	May 22	Rotary pump.
Osborn, B. (Haddan)	865	Mar. 1	Paper-boxes.
Osborn, S. (Stevenson)	3000	July 25	Lubricating apparatus.
Osenbrück, A. (Jensen)	2099	May 18	Railway wheels & axles and lubricating same.
Osler, A. F.	3306	Aug. 23	Propelling vehicles.
Osmond, J.	967	Mar. 6	Dog-carts and other vehicles.
„ J.	3106	Aug. 4	Dog-carts and other vehicles.
Osthaus, Eicken, Asbeck & Co. (von Nawrocki).	2689	June 29	Armour-plates.
„ Eicken, Asbeck & Co. (von Nawrocki).	2704	July 1	Uniting iron and steel.
Östlund, C.	4551	Nov. 23	Lighting fires ("Swedish" fire-lighter).
Othon, L. P.	3249	Aug. 18	Motive-power engines.
„ L. P.	4379	Nov. 11	Pumps.
Otter, C. G. von (Brewer)	2921	July 17	Signalling and telegraphing from ships, &c.
„ C. G. von (Brewer)	2931	July 18	Signalling.
Otto, N. A. (Abel)	2081	May 17	Gas-motor engines.
Outridge, J. E.	2716	July 1	Steam and other engines and pumps.
Owen, C. T., & Oliver, W.	147	Jan. 13	Motive-power engines; power-breaks & hoists.
„ J. H.	1470	Apr. 6	Roller skates.
Owen, J. R. N. (Gedge)	862	Feb. 17	Breech-loading cannon.
Oxley, J.	1231	Mar. 22	Tramway rails and fastenings.

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Pace, E.	3122	Aug. 5	Scoring, &c. blanks for match and other boxes.
Packing Company, Adair (Hunt)	3584	Sep. 12	Packing for pistons.
Padbury, R. H.	2190	May 24	Sewing-machines.
Paddock, M. H. (Clark)	1830	May 1	Combined calendar and time-piece.
Paddock, W.	2934	July 18	Governors for steam and other engines.
Page, G. G., Powis, C., & Curzon, H.	216	Jan. 19	Constructing roofs.
„ H.	3018	July 26	Transmitting written messages.
„ J., & Wells, G.	4909	Dec. 13	Roller or rink skates.
„ W.	5035	Dec. 29	Valves, taps, or cocks.
Paget, A.	1364	Mar. 30	Stands, &c. for tipping basins.
„ F. A., & Gregory, G. W.	3635	Sep. 16	Producing "clocking" on hosiery.
„ H. S.	32	Jan. 4	Cleaning, sweeping, and painting machine.
Paillard, J. M. (Johnson)	811	Feb. 26	Artificial fuel.
Paine, E.	2348	June 5	Cleaning ships' bottoms.
Paine, W. H. (Cocker)	4764	Dec. 9	Straightening and coating wire.
Pallas, L., Labarthe, B., & Guillemae, A. (Newton).	4369	Nov. 11	Lamps.
Palmerantz, H.	2309	June 1	Mowing and reaping machines.
Palmerantz, H. (Nordenfelt)	874	Mar. 1	Gun-carriages.
Palmer, H. T.	1348	Mar. 29	Mules and mule-doublers.
Palmer, John	1451	Apr. 15	Removing hair from, and tanning, &c. hides.
„ John D.	261	Jan. 22	Gas-burners.
„ John H.	17	Jan. 3	Roller skates.
„ Joseph	590	Feb. 14	Window, door, and sash fastening.
„ R.	63	Jan. 6	White lead.
„ T. G., & Clark, H. F.	3755	Sep. 26	Cancelling stamps; post-marking letters, &c.
„ T. N. (Royer)	290	Jan. 22	Kilns for burning minerals.
„ T. N. (Weymann)	4571	Nov. 25	Treating or preparing meal.
„ W., & Wooding, C. H.	719	Feb. 21	Roller skates.
Palmieri, H. (Hunt)	2183	May 22	Sunshades and umbrellas.
Pansard, P. (Clark)	2690	June 29	Waterproofing compound for skins.
Paquelin, C. A. (Clark)	387	Jan. 31	Producing heat and light.
„ C. A. (Clark)	3055	July 29	Producing heat for surgical purposes, &c.
Parker, A. J.	2509	June 16	Ruling paper.
„ J. H., & Walker, T.	143	Jan. 13	Loom pickers.

Name.	Number of Application.	Date of Application.	Subject.
Parker, R.	729	Feb. 22	Distributing manures.
" R.	3988	Aug. 28	Distributing manures.
" T., & Weston, P. A.	2556	June 20	Steam-pumps and steam-engines.
" T. L.	3885	Oct. 7	Treating tobacco.
" T. L.	5008	Dec. 28	Packing and storing perfumes and similar [articles.
" W. C., & Stabler, J.	3573	Sep. 12	School furniture.
" W. J.	3999	Oct. 13	Brake for perambulators.
Parkes, A.	540	Feb. 10	Treating nickel ores and alloys.
" A., & Mason, Sir J.	2088	May 17	Treating ores and alloys of nickel.
" T.	3454	Sep. 1	Shovels, spades, and like tools.
Parlour, J. T.	2028	May 13	Preventing skaters falling.
Parmiter, J.	1808	Apr. 29	Steam-ploughing.
Parnall, J.	4124	Oct. 24	Scale-beams and weighing machines.
Parnell, E. A.	2002	May 12	Arsenious acid and metallic arsenic.
" E. A.	3183	Aug. 11	Utilising tin-plate scrap and waste.
Parrott, R. P. (Newton).	647	Feb. 16	Projectiles for ordnance.
Parsons, H.	3014	July 26	Joining pipes.
" P. M.	482	Feb. 7	Metallic alloys.
" W.	2599	June 21	Turning wood, &c.
Partridge, E.	3559	Sep. 11	Coach-axles and their boxes.
" S.	2896	July 14	Railway carriage couplings.
Pasquale, F., & Zanini, P. G. B. (Mills)	1000	Mar. 8	Steam-engines.
Pass, E. de (Hénard)	111	Jan. 11	Fire-arms.
" E. de (Converse)	408	Feb. 2	Drilling rock.
" E. de (Andrade)	772	Feb. 24	Steam-engine governors.
" E. de (Guerrant)	1344	Mar. 29	Electro-engraving machines.
" E. de (Coignet)	1718	Apr. 22	Generating steam; economising fuel.
" E. de (Imbe)	2313	June 1	Combing fibres.
" E. de (Trouillet)	3154	Aug. 9	Perforating paper, cardboard, metal, &c.
" E. de (Bozérián)	4102	Oct. 23	Motive-power.
" E. de (Leathers)	4881	Dec. 18	Artificial stone.
" E. de (Raouze)	5052	Dec. 30	Railway and tramway car brakes.
Passee, T. E.	3372	Aug. 28	Marine and other engines; cranks.
Passman, T. F.	3323	Aug. 24	Steam-boilers.
Pastorelli, F. J.	1598	Apr. 15	Measuring air-currents, &c, and speed of [vessels.
Paterson, J.	4554	Nov. 24	Turning and tightening keys in cocks.
Patterson, J.	587	Feb. 12	Stamping minerals, &c.; springs; power-ham- [mers.
" T. L., & Walker, H. W.	3520	Sep. 7	Treating residual liquors in making sugar.
" T. L., & Walker, H. W.	4089	Oct. 21	Treating residual liquids in making sugar.
Pattinson, F., & Buck, J. P. & R. R.	2753	July 5	Preparing cotton as an absorbent.
Pattus, A. L. Junod. (Clark)	2797	July 8	Keyless repeating watches.
Pattysen, W. D. C. (Haddan)	567	Feb. 12	Distributing type.
Paul, J. M.	4484	Nov. 18	Railway brakes and actuating same.
Payne, A.	1481	Apr. 7	Concrete buildings.
" C., & Steel, P.	3973	Oct. 14	Securing scarf-pins, brooches, &c,
Payre, F. (Malfroy)	1057	Mar. 11	Liquid-meter.
Payton, W., & Holmes, J. E.	87	Jan. 7	Steam or other fluid engines; raising, &c. [liquids.
Peacock, B. F.	4711	Dec. 6	Metal hoop for casks, tubs, &c.
" J. C.	435	Feb. 3	Ovens.
Peall, O. F., Roy, J. W., & Dorward, P.	2359	June 6	Composition for curing plants of insects, &c.
Pearce, Harry	2592	June 23	Locks.
" Henry, & Douglas, W. H.	3113	Aug. 4	Studs and soil-taires.
" J. K.	3955	Oct. 12	Chains.
Pearn, F. & S.	1738	Apr. 25	Steam-pumps and valves.
" F. & S.	1854	May 3	Extinguishing fires in mills, &c.
" F. & S.	3827	Oct. 3	Steam-engines and boilers.
" S. & F.	1738	Apr. 25	Steam-pumps and valves.
" S. & F.	1854	May 3	Extinguishing fires in mills, &c.
" S. & F.	3827	Oct. 3	Steam-engines and boilers.

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Pearse, W. F., & Lever, A.	2377	June 7	Name and number indicators.
Pearson, J., & Wheeler, H.	934	Mar. 4	Steam-pumps.
„ J., Entwistle, L., & Whitaker, [W. A. & O. L.]	3838	Oct. 4	Spinning fibres.
„ M. H.	577	Feb. 12	Sewing-machines.
„ M. H.	2548	June 20	Sewing-machines and driving same.
„ W. (Cross)	4689	Dec. 4	Graining wood and other surfaces.
Peaud, L. L. (Rocheman)	3450	Sep. 1	Asphaltum.
Peckham, P. (Haddan)	4094	Oct. 23	Coal and ash sieves.
Pecqueux, E. A.	2768	July 7	Lace-making.
Pedder, J., & Abel, G. (King)	1056	Mar. 11	Table cutlery.
Peebles, D. B.	3231	Aug. 16	Gas-regulators and valves.
„ J.	3861	Oct. 6	Railway breaks.
Peel, W., Lancaster, W., & Pilkington, J. H.	3716	Sep. 22	Looms.
Peipers, W. & Co. (Beer)	4041	Oct. 19	Drawing or depicting objects, &c.
Peirce, A. E.	2586	June 23	Winding or picking up garden-hose, &c.
„ W. A.	1984	May 11	Fastening for harness straps, &c.
Pekár, E. (Jensen)	2392	June 8	Testing meal and flour.
Pellatt, W. C.	1367	Mar. 30	Covering tablets with foil, paper, &c.
„ W. C.	3622	Sep. 16	Folding wrappers round cakes of blacking, &c.
Peltier, P. D., & Roussel, A. P. (Clark)	3498	Sep. 5	Motive-power.
Pemberton, F., & Gibson, J. W.	1595	Apr. 15	Manufacturing tobacco.
„ J., & Williams, T.	2771	July 7	Steam-boilers.
Pendleton, H. G.	2475	June 15	Solitaire and stud fastenings.
Pengelly, A.	72	Jan. 7	Spindle bearings.
Penley, S. H., Dorman, R., & Annie J. [(Lake).]	1010	Mar. 8	Making veneers.
Penn, J.	349	Jan. 28	Steam-engines.
Penney, T.	70	Jan. 6	Ticketing and exhibiting jewellery, &c.
Pennie, H. (Arding)	3087	Aug. 2	Coupling for pipes or hose.
Penning, J. R.	4002	Oct. 17	Indicating pressure of fluids.
Penrice, H. N.	794	Feb. 25	Rock-boring, tunnelling, and shaft-sinking.
Penrose, F. C.	1525	Apr. 10	Measuring spherical triangles.
Percival, W. H.	3847	Oct. 4	Folding-chair.
Periam, E. T.	1414	Apr. 1	Screw-bolts.
Périnaud, J., & Marchal, J.	3018	July 26	Suppling silk fabrics.
Perkes, T.	129	Jan. 12	Fire-arms.
Perkins, F. H. & R. W., Williams, J.	4264	Nov. 4	Furnaces for burning anthracite, &c.
„ R. W. & F. H., & Williams, J.	4264	Nov. 4	Furnaces for burning anthracite, &c.
„ S., Smellie, W., & Sacré, C.	4611	Nov. 28	Iron blooms or ingots for railway rails, &c.
„ T., & Brown, H.	4706	Dec. 5	Cultivating or tilling land.
„ W.	1642	Apr. 19	Railway carriage lamps.
Perks, F. (Butcher)	3511	Sep. 6	Sewing-machine shuttles.
„ F. (Butcher)	3512	Sep. 6	Sewing-machines.
Perls, L. L. M.	4196	Oct. 30	Step-chair and table for ironing, &c.
Perret, P. A., Gervais, A., & Murisier, L. [(Clark).]	2058	May 16	Camp-kettles.
Perrier & Boccard (Browne)	4442	Nov. 16	Motors for sewing-machines, &c.
Perrin, J.	4181	Oct. 28	Hardening felt hat forms.
Perry, A.	3749	Sep. 26	Kiln-drying of malt, &c.
Person, L.	1351	Mar. 24	Bag-locks.
Pesinger, G. W., & Pessinger, J. S. (Mills)	4194	Oct. 30	Fitting or setting elliptic springs.
Pessinger, J. S., & Pesinger, G. W. (Mills)	4194	Oct. 30	Fitting or setting elliptic springs.
Peyrouse, L. A. L. E. P. de la	3209	Aug. 15	Gas-making.
Petit, L.	4567	Nov. 25	Tension mechanism for looms.
Petitpierre, F. (von Castilberg)	763	Feb. 23	Imitation marbles, &c.
Petty, J. N., & Massey, G. B. (Morgan)	3271	Aug. 19	Steam-engines.
Petzold, A., & Sanden, O. (Abel)	3748	Sep. 26	Extinguishing sparks in steam-boiler flues &c.
Pfleiderer, P.	2953	July 20	Kneading and mixing substances.
Phelps, G. M.	3203	Aug. 14	Printing-telegraphs.
Philips, R., & Grierson, J. S.	4449	Nov. 17	Printing-machines.
Philipson, W.	4684	Dec. 4	Supplying and winding thread for shuttles.

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Phillippi, A. H. & Westinghouse, G.	4296	Nov. 7	Lighting railway carriages.
Phillips, C., & Leonard, C. - - -	4156	Oct. 26	Trunk and box fastenings.
" James E. - - - - -	3542	Sep. 8	Reaping, mowing, &c. machines; binding ^{crops}
" James F. - - - - -	885	Mar. 1	Reaping-machine fingers.
" John - - - - -	257	Jan. 21	Stopping and starting tram-cars, &c.
" John - - - - -	487	Feb. 7	Mortising-machines
" Jonathan, & Johnson, W. -	180	Jan. 17	Mounting wheels of traction engines, &c.
" S. E., & Johnson, W. C. -	3533	Sep. 8	Telegraph cables.
" S. E., & Johnson, W. C. -	3534	Sep. 8	Telegraph insulators.
" T. - - - - -	1858	May 3	Fixing telegraph posts.
Picard, E. Gaudchaux - - - -	4318	Nov. 8	Unweaving fabrics and utilizing filaments.
Picard, E. J. B. A. (Gedge) - -	849	Feb. 29	Lock.
Pichat & Teste, A. et fils. (Clark) - -	5049	Dec. 29	Umbrella and sunshade fastenings.
Pichler, S. F. - - - - -	97	Jan. 8	Walking figures.
Pick, I. - - - - -	3317	Aug. 23	" Costume pocket," and muff.
Pickering, F., Swift, W., & Hunter, S. J. - - - -	4191	Oct. 30	Envelopes used in extracting oil.
" - - - - -	1896	Mar. 31	Lubricators.
Picking, G. G., Hopkins, W., Haden, [P., & Beyfus, L. - - - -	361	Jan. 29	Raising sunken vessels.
Pickles, James, & Gabriel, E. - - -	3416	Aug. 30	Receptacles for excreta, &c.
" John & W. H. - - - - -	1825	May 1	Spinning fibres.
" T. & Hattersley, R. L. - - -	63	Jan. 7	Looms.
" W. H. & J. - - - - -	1825	May 1	Spinning fibres.
Piedbœuf, G. - - - - -	1916	May 6	Steam-boilers.
Pielsticker, C. M. - - - - -	797	Feb. 25	Refining ozokerite.
Pieper, C. (Cario) - - - - -	780	Feb. 24	Steam-engine expansion gear.
" C. (Helmsmüller) - - - - -	798	Feb. 25	Thrashing-machines.
" C. (Pröll) - - - - -	1139	Mar. 16	Governors.
" C. (Liebe) - - - - -	1300	Mar. 27	Printing on rough surfaces.
" C. (Seidel) - - - - -	1652	Apr. 20	Trusses.
" C. (Bodemer) - - - - -	1779	Apr. 27	Indirect-acting governors.
" C. (Bauer) - - - - -	1803	Apr. 28	Copying and multiplying apparatus.
" C. (Klein) - - - - -	1836	May 2	Carding fibres.
" C. (Zipser) - - - - -	4090	Oct. 23	Grain-cutting machinery.
" C. (Daelen) - - - - -	4091	Oct. 23	Transmitting rotary motion.
" C. (Ehrlich) - - - - -	4098	Oct. 23	Musical instruments.
" C. (Bodemer) - - - - -	4491	Nov. 20	Cleaning cylinders of spinning-machines.
" C. (Martin) - - - - -	4592	Nov. 27	Peeling barley.
" C. (Cohnfeld) - - - - -	4593	Nov. 27	Feeding steam-boilers; forcing water.
" C. (Eickhoff, Eickhoff, & Ardelet) - - -	4673	Dec. 2	Safety-apparatus for hoisting-cages.
" C. (Thiele) - - - - -	4890	Dec. 18	Sewing-machines.
" C. (Kleinau) - - - - -	4903	Dec. 19	Cocks.
Pierce, C. W. (Morgan) - - - -	3449	Sep. 1	Rotary steam-boilers.
Pierce, P. - - - - -	4195	Oct. 30	Blowing fans.
Piers, Sir E. F. - - - - -	515	Feb. 9	Signalling on railways and stopping trains.
Pigott, G. - - - - -	679	Feb. 18	Lace-making machinery.
Pike, J. - - - - -	1109	Mar. 15	Checking fares in tram-cars, &c.
Pilbrow, J. - - - - -	196	Jan. 18	Wheel or roller skates.
Pilkington, J. H., Peel, W., & Lancaster, W. - - - -	3716	Sep. 22	Looms.
" W. - - - - -	608	Feb. 15	Flexible and elastic rods.
" W., & Beaumont, F. E. B. - - -	1061	Mar. 11	Roller skates.
Pilliner, A. C., Williams, W., & Hill, J. C. - -	4986	Dec. 23	Rolling rail ends and old rails into billets, &
Pinder, W. H. - - - - -	1756	Apr. 26	Roller skates.
Pinel, M. P. A., Lecœur, E. J. J., & Hetherington, J. M. - - - -	254	Jan. 21	Combing fibres.
Pingot, G. F. (Aron) - - - - -	5059	Dec. 30	Fastener for neckties and like articles.
Pingree, S. W., & Spencer, C. L. (Lake) - -	2543	June 19	Knitting-loom.
Pinkney, R., & Ward, F. D. - - -	4470	Nov. 18	Printing or surfacing ink.
Pintsch, J. (Abel) - - - - -	4515	Nov. 21	Floating lights.
Pion, J. B. L. (Johnson) - - - -	3086	Aug. 2	Rolling metal.
Piper, C. T. W. - - - - -	3039	July 28	Venetian blinds.

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Piper, J. E.	1848	May 2	Milk-food.
Pirie, A. C., & Groundwater, R.	4846	Dec. 14	Laying out envelopes, &c. for bordering.
Pitt, S. (<i>Kamienski</i>)	3169	Aug. 10	Treating ores of copper, &c. for metals or salts.
" S. (<i>Count de Playter-Syberg</i>)	3181	Aug. 11	Making copper articles.
" S. (<i>Whittenhall</i>)	4546	Nov. 23	Railroad cross-ties.
" S. (<i>Huët</i>)	4759	Dec. 8	Constructing ships and propelling same.
Place, J.	4933	Dec. 21	Magic-lantern slides.
Planchon, F. A. (<i>Hunt</i>)	646	Feb. 16	Jacquard-apparatus.
Plass, R. H., & McManus, H.	3422	Aug. 30	Gas-governors.
Plateau, E. (<i>Berly</i>)	4820	Dec. 13	Pocket-book portable ink.
Platt, J., Fielding, J., & Tweddell, R. H.	3134	Aug. 7	Hydraulic-presses for stamping, forging, &c.
" J., Fielding, J., & Tweddell, R. H.	3665	Sep. 19	Hydraulic machine tools.
" T.	660	Feb. 17	Lubricating spindles.
Player, J. H., & Holmes, N. J.	4125	Oct. 24	Signal-lights for marine purposes, &c.
Playter-Syberg, <i>Count S. de</i> (<i>Pitt</i>)	3181	Aug. 11	Making copper articles.
Plessner, J. M.	2489	June 15	Water or liquid-meters.
" J. M.	2899	July 14	Withdrawing liquids from decanters, &c.
Plichon, A. J., & Thuau, C. L. (<i>Clark</i>)	4847	Dec. 14	Crucibles and portable furnaces.
Plieque, J. F., & Geisoldt, L. A. (<i>Clark</i>)	4433	Nov. 16	Decolorizing, &c. saccharine juices.
Plush, R. H.	961	Mar. 6	Pumps.
Pocock, A. W.	2040	May 15	Cutting mortices in doors or panels.
" A. W.	3833	Oct. 3	Cutting mortices and slots in timber.
Pohlig, J. (<i>Johnson</i>)	4300	Nov. 7	Steam-boilers.
Poletti, M. (<i>Mills</i>)	2887	July 14	Making bricks, slabs, &c.
Pollack, H. (<i>Jensen</i>)	2330	June 2	Extincteurs.
" H. (<i>Jensen</i>)	4257	Nov. 3	Sewing-machines.
Pollard, W., & Bramwell, S.	1816	May 1	Doubling yarns.
Pollit, J., & Wigzell, E.	3603	Sep. 14	Drying skeins or hanks of wool, &c.
Pollock, T.	1301	Mar. 27	Leno, gauze, or muslin curtains.
Pols, J. A.	2432	June 13	Cleaning seed; refining oil, &c.
Pond, B. F. (<i>Green</i>)	2301	May 31	Wood-paving.
Ponsard, A. (<i>Johnson</i>)	1047	Mar. 10	Making steel; treating, &c. cast metals.
Pontifex, J. H., & Worth, S. L.	4240	Nov. 2	Ventilating water-proof garments.
Poole, S. (<i>Coleman & Bird</i>)	2799	July 8	Spring "traveller" for ships.
" S. (<i>Coleman & Bird</i>)	2800	July 8	Hooks or couplings.
" S. (<i>Bird</i>)	4188	Oct. 28	Can and metallic case openers.
Poole, W.	1404	Apr. 1	Milk-cans.
Pooley, H., & Wood, J.	100	Jan. 8	Weighing-machines.
Pope, A.	1224	Mar. 22	Motive-power engines.
" A. A.	1382	Mar. 30	Air-guns or pistols.
" A. A. (<i>Carey</i>)	1381	Mar. 30	Air-pistols.
" W. A.	786	Feb. 24	Signalling upon railways.
" W. A., & Garrett, N. D.	205	Jan. 19	Signalling in trains.
Port, E., Buffoy, P. H., Dupré, P. S. E., & Rogé, H. N. (<i>Clark</i>)	3823	Oct. 3	Treating grain, plants, &c. for preserving same.
Porteous, J., & Thomson, R.	4579	Nov. 27	Making tobacco.
Porter & Cook Needle Co. (<i>Hughes</i>)	792	Feb. 25	Needle machines.
Porter, G.	1223	Mar. 22	Glass shades and reflectors.
" J. H.	1697	Apr. 21	Filtering water.
" W. M., & Mulholland, J. R. T.	4144	Oct. 25	Winding-machines for making pirns.
Posselt, E.	4656	Dec. 1	Forming selvages on fabrics.
" E.	4968	Dec. 23	Woven fabrics.
Postle, J. D. (<i>Johnson</i>)	3792	Sep. 29	Motive-power; condensing, &c. gases.
Potel, A. (<i>Clark</i>)	3418	Aug. 30	Woven fabric.
Potter, A. M.	3212	Aug. 15	Saving breakage of coals in delivering same.
" H. A.	2111	May 18	Hot-water boilers.
" J. J., & Attwood, C.	2275	May 30	Glazing buildings.
Pottier, C.	1658	Apr. 20	Hot-air apparatus for steam-boilers.
Potts, B. L. F.	398	Feb. 1	Gloves for use while skating.
Poulsom, W.	3429	Aug. 31	Elevating grain, salt, small-coal, &c.
Pound, J., & Stevens, C. R.	2031	May 15	Roller-skates.
Powell, R., & Atkins, W.	4362	Nov. 11	Hypo-sulphite of soda.
" W.	493	Feb. 7	Fire-arms.

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Powers, C. T. - - - - -	2854	July 13	Winding thread on to spools.
Powis, C. - - - - -	4683	Dec. 4	Circular band sawing and boring machine
" C., Curzon, H., & Page, G. G.	216	Jan. 19	Constructing roofs.
Prang, L., & Spurr, C. W. - - -	446	Feb. 4	Veneering for ornamentation of furniture.
Prange, F. (<i>Mannstaedt</i>) - - - -	252	June 17	Making tin plates.
Pratchitt, J. & W. - - - - -	3491	Sep. 5	Compound steam-engines.
" W. & J. - - - - -	3491	Sep. 5	Compound steam-engines.
Pratt, F. A., & Reynolds, J. R. (Lake)	1274	Mar. 24	Varnishing cartridge shells.
Pratt, G. - - - - -	1826	May 1	Strap buckles.
" J. E. - - - - -	1258	Mar. 24	Silvering mirrors and glass.
" J. E. - - - - -	1259	Mar. 24	Preparing glass for silvering.
Pray, B. S. & J. F. Johnson, D. A. & [Beers, W. (Lake).	3652	Sep. 18	Axles and axle-boxes.
" J. F. & B. S., Johnson, D. A. & [Beers, W. (Lake).	3652	Sep. 18	Axles and axle-boxes.
Preece, G., H. & T. - - - - -	2223	May 26	Corn and seed drill.
" H., T. & G. - - - - -	2223	May 26	Corn and seed drill.
" T., G. & H. - - - - -	2223	May 26	Corn and seed drill.
Prestage, F. - - - - -	3456	Sep. 1	Tiles, and making same.
Prestige, J. T., & Preston, F. P. & E. J.	2870	July 13	Pumps and fittings for same.
" J. T., & Preston, F. P. & E. J.	2898	July 14	Regulating flow of water for waterclosets, &
" J. T., & Preston, F. P. & E. J.	4844	Dec. 14	Regulating flow of and preventing waste water, &
Preston, A. (Morton) - - - - -	220	Jan. 19	Washing clothes, &c.
Preston, E. - - - - -	986	Mar. 7	Roller skates.
" E. J. & F. P., & Prestige, J. T.	2870	July 13	Pumps and fittings for same.
" E. J. & F. P., & Prestige, J. T.	2898	July 14	Regulating flow of water for waterclosets, &
" E. J. & F. P., & Prestige, J. T.	4844	Dec. 14	Regulating flow of and preventing waste water, &
" F. P. & E. J., & Prestige, J. T.	2870	July 13	Pumps and fittings for same.
" F. P. & E. J., & Prestige, J. T.	2898	July 14	Regulating flow of water for waterclosets, &
" F. P. & E. J., & Prestige, J. T.	4844	Dec. 14	Regulating flow of and preventing waste water, &
Price, A. P. - - - - -	1394	Mar. 31	Skate wheels or rollers.
" C., & Harris, W. - - - - -	1329	Mar. 28	Fire-arms.
" C. T. - - - - -	1918	May 6	Candlesticks.
" H. - - - - -	620	Feb. 15	Spring-mattresses.
" H. H. - - - - -	304	Jan. 25	Foot apparatus for travelling.
Prichard, Eliza - - - - -	4533	Nov. 22	Window-fasteners.
Priestland, T. - - - - -	1614	Apr. 18	Hinges.
Priestley, J. W. - - - - -	713	Feb. 19	Cooking and heating.
" S., & Hall, R. - - - - -	3202	Aug. 14	Making spiral and metallic bands.
Prince, F. - - - - -	3396	Aug. 28	Displaying photographic pictures, &c.
" H., & Thorpe, C. - - - - -	4668	Dec. 2	Direct-acting steam-pumps.
" H., & Thorpe, C. - - - - -	4717	Dec. 6	Condensers.
Prince, L. F., Edwards, R. L. & Lucas, [A. H. (Newton)	4308	Nov. 7	Egg-boxes or cases.
Pringle, W., & Keel, G. - - - - -	1562	Apr. 13	Roller skates.
Prior, R. M. - - - - -	2554	June 20	Electro-plating with nickel.
Pritchett, G. E. - - - - -	3785	Sep. 28	Appliances for utilising clocks, &c.
Procopé, Maria - - - - -	611	Feb. 15	Tuning apparatus for organs, &c.
Procopé, Maria (Fröst) - - - - -	3216	Aug. 15	Tuning apparatus for organs, &c.
Proctor, D. R. (Clarke) - - - - -	1539	Apr. 11	Spark-arresters.
Proctor, K. - - - - -	3522	Sep. 7	Buttons and fastening same; screw-rivets.
Pröll, R. (Pieper) - - - - -	1139	Mar. 16	Governors.
Prosser, T. T., & Noble, O. Le G. (Lake)	1105	Mar. 14	Pegging boots, &c.; wire pegs.
Protheroe, P. - - - - -	1035	Mar. 10	Raising sunken vessels.
" P. - - - - -	2431	June 12	Signalling apparatus for divers.
" P. - - - - -	2468	June 14	Anchors and sinking same.
" P. - - - - -	2725	July 3	Telegraphing with light-ships; moorings.
Prudencio, F., Batten, C. W., & Griffin, [J.	4510	Nov. 21	Bottles for aerated liquids and stoppering same
Prust, W. E., & Browne, S. G. - - -	1653	Apr. 20	Making boots and shoes.

Name.	Number of Application.	Date of Application.	Subject.
<i>Pruvost-Volante et fils, & Free, R.</i> -	519	Feb. 9	Kilns for drying malt, &c.
<i>Pryse, C.</i> - - - - -	4421	Nov. 15	Fire-arms.
<i>Pugh, C. H., & Storer, J.</i> - - -	4967	Dec. 23	Retort lid fastenings.
<i>Pullan, A. & T. W., & Bebbington, G.</i> -	4123	Oct. 24	Locomotives and carriages.
<i>T. W. & A., & Bebbington, G.</i> -	4123	Oct. 24	Locomotives and carriages.
<i>Pullar, J., Goslin, S. B., & Wilks, G.</i> -	393	Feb. 1	Divers' dresses.
<i>Pullman, A. B., & Allen, R. N.</i> - -	40	Jan. 4	Railway wheels.
<i>Pullon, J. T., & Sykes, W. (Lee)</i> - -	474	Feb. 5	Counting and registering apparatus for cars, &c.
<i>Pulvermacher, I. L.</i> - - - - -	1900	May 5	Generating, testing, applying, &c. electricity.
<i>I. L.</i> - - - - -	3782	Sep. 28	Generating, testing, applying, &c. electricity.
<i>Pumphrey, R. B.</i> - - - - -	2358	June 6	Swimming and diving apparatus.
<i>Punshon, R.</i> - - - - -	2882	July 14	Railways.
<i>R.</i> - - - - -	3402	Aug. 29	Railways.
<i>R.</i> - - - - -	5024	Dec. 28	Signalling in trains and on railways,
<i>Purchase, J.</i> - - - - -	1203	Mar. 21	Obtaining fibres from plants.
<i>Purslow, J., & Clark, C. F.</i> - - -	2153	May 20	Lids for sauce-pans, &c.
<i>Purvis, E. (Newton)</i> - - - - -	1620	Apr. 18	Engine-valves.
<i>E. (Thompson)</i> - - - - -	4653	Dec. 1	Valves and valve-casings for motive-power [cylinders.]
<i>Purvis, T., & Wyatt, G.</i> - - - -	1475	Apr. 6	Internal tube-cutter.
<i>Pusey, C. J., & Davis, R. W. (Reynolds)</i> -	2560	June 21	Carriage wheels.
<i>Putnam, H. W.</i> - - - - -	1201	Mar. 21	Wire-bending machines.
<i>Putnam, H. W. (Murdoch)</i> - - - -	978	Mar. 7	Making fence wire.
<i>H. W. (Gardner)</i> - - - - -	3188	Aug. 12	Wire fastenings of bottle-stoppers.
<i>Puttemans, P. G. (Browne)</i> - - - -	2072	May 16	Ventilating buildings, mines, ships, &c.
<i>Pye, G. (Coleman & Bird)</i> - - - -	2801	July 8	Reaping and mowing machines.
<i>Pye-Smith, A., White, O. W., & [Elliot, R.]</i> - - - - -	1273	Mar. 24	Stable fittings and paving.
<i>Pyke, A.</i> - - - - -	3233	Aug. 17	Napkin or serviette rings.
<i>Pyrke, R. C.</i> - - - - -	3997	Oct. 16	Tea and coffee urns.
<i>Pzillas, R., & Kohrig, R. (Martineau)</i> -	2169	May 22	Cutting sugar.
<i>R., & Kohrig, R. (Martineau)</i> -	3267	Aug. 19	Cutting and packing sugar.

Q.

<i>Quackenbush, H. M.</i> - - - - -	765	Feb. 23	Projectiles for air-guns.
<i>Quackenbush, H. M. (Swett, Sheldon, & Squire).</i> - - - - -	227	Jan. 20	Turning lathes.
<i>Quarante, P. L. (Lake)</i> - - - - -	461	Feb. 4	Hygienic candles and lamps.
<i>Quennesson, L. J. T. (Ducomet)</i> - - -	943	Mar. 4	Expressing sugar-cane juice, &c.
<i>Quick, J., & Camroux, M. O.</i> - - -	3886	Oct. 7	Smoking pipes.
<i>R.</i> - - - - -	4488	Nov. 20	Baths heated by gas.
<i>Quin, R.</i> - - - - -	619	Feb. 15	Drinking vessels or tumblers.
<i>Quinquarlet-Dupont, L. A. (Brewer)</i> -	204	Jan. 19	Sewing hosiery, &c.
<i>Quinsey, W.</i> - - - - -	2172	May 23	Bakers' oven doors and dampers.

R.

<i>Radeliffe, M. W.</i> - - - - -	4920	Dec. 20	Refrigerating filter and provision preserver.
<i>Radde, C. H. O. (Brookes)</i> - - - -	2268	May 30	Printing in colours.
<i>Radway, R. G., & Daniels, W. (Jensen)</i> -	2644	June 27	Umbrella and parasol frames.
<i>Ragg, A. E.</i> - - - - -	3367	Aug. 28	Trimming lawn-edges or grass-borders.
<i>Rainforth, W. & W.</i> - - - - -	3232	Aug. 16	Steam-cultivators.
<i>Ramsden, J. C.</i> - - - - -	2280	May 30	Chain-cables or moorings.
<i>J. C.</i> - - - - -	2282	May 30	Metal fabric and applying same.
<i>J. C., & Keighley, E.</i> - - - -	2281	May 30	Combustion of fuel.

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Ramsden, R., & Taylor, J. L. - -	739	Feb. 22	Spinning mules.
„ R., & Taylor, J. L. - -	1397	Mar. 31	Spinning and doubling.
„ R., & Taylor, J. L. - -	3109	Aug. 4	Spinning mules.
Ramsey, R. - - - - -	3336	Aug. 25	Preventing accidents from over-winding [mines, lifts, or ho]
„ R. - - - - -	4073	Oct. 21	Buffer hoops for pit-tubs, trucks, &c.
„ R., & Hann, E. M. - - -	4860	Dec. 15	Preventing accidents from over-winding [mines,
Ramsbacher, T., & Müntz, A. (Martin)	1673	Apr. 21	Urinals.
Rands, C. - - - - -	4573	Nov. 25	Treating vegetable substances for alcohol [liquid
Rankine, J. - - - - -	2126	May 19	Boiler tube-stopper.
Raoult, J. L. J. (de Pass) - - -	5052	Dec. 30	Railway and tramway car brakes.
Randall, H. R. & Boomer, O. F. (Lake)	4995	Dec. 26	Malt-syrup or extract.
Raper, J. - - - - -	2819	July 11	Hair and clothes brushes.
Rastrick, J. L. - - - - -	2106	May 18	Tube-scrapers.
Ratcliff, C. W. & F. - - - - -	4208	Oct. 31	Doffing fibres in carding and thinning the spin
„ F. & C. W. - - - - -	4208	Oct. 31	Doffing fibres in carding and thinning the spin
Rathbun, L. V. - - - - -	2988	July 24	Cleaning bolting-reel cloths.
Rattray, W., & Milne, J. - - -	4733	Dec. 7	Making up rolls of tobacco.
Raulin, J. (Clark) - - - - -	4923	Dec. 20	Treating wool.
Rave, C. (Clark) - - - - -	2534	June 19	Black dye.
Ravenscroft, F. - - - - -	2602	June 24	Making locking tiles.
„ J. - - - - -	1359	Mar. 30	Securing tiles to surfaces.
Ravet, E. - - - - -	2498	June 16	Working screw-presses.
Rawson, C., & Slater, J. W. - - -	13	Jan. 1	Deodorising and purifying sewage.
„ C., & Slater, J. W. - - -	1893	May 5	Purifying sewage, &c. and agents for same
„ J. C. - - - - -	3074	Aug. 1	Doubling yarns.
Rayner, G., Harrison, J., & Glenden- [ning, W.	127	Jan. 12	Washing clothes, &c.
„ G., Harrison, J., & Glenden- [ning, W.	3192	Aug. 12	Washing clothes; churning butter.
„ G. G., & Sides, W. - - -	4129	Oct. 25	Cutting and dressing rock.
Razkazoff, L. - - - - -	2238	May 27	Absorbing recoil of ordnance.
„ L., & Anderson, W. - - -	388	Jan. 31	Working heavy guns.
Read, G. W., & Bartlett, H. T. (Clark)	1407	Apr. 1	Cutting veneers.
Readett, J. R. - - - - -	3873	Oct. 6	Cutting rags, fodder, and litter.
Rebour, N. (Dérot) - - - - -	4889	Dec. 18	Roller skates.
„ N., & Dérot, A. L. B. (Wise)	2744	July 4	Roller skates.
„ N., & Dérot, A. L. B. (Wise)	2905	July 15	Utilizing centrifugal force.
Recordon, E. (Gedge) - - - - -	1576	Apr. 13	Writing machine or "Diplograph."
Reddaway, F. - - - - -	3226	Aug. 16	Weaving hose or tubular goods.
Reddell, W. T. - - - - -	4460	Nov. 18	Receptacles for spirituous liquors.
Redden, H., & Walsh, J. E. & P. H. (Clark).	2437	June 13	Securing mouths of grain bags, &c.
Redfern, G. F. (Sack) - - - - -	1072	Mar. 11	Shaping screw-nuts, washers, &c.
„ G. F. (Bourquet) - - - - -	2035	May 15	Folding chair or seat.
„ G. F. (Hochapfel frères) - - -	2942	July 19	Tobacco pipes.
„ G. F. (Sergent & Valken- [huizen).	3090	Aug. 2	Ball-caster.
„ G. F. (Sack & Reunert) - - -	3370	Aug. 28	Gas-motor engines.
„ R., Ashworth, J., & Green- [wood, J.	4895	Dec. 19	Constructing loom "swells."
Redfield, G. S. (Lake) - - - - -	947	Mar. 4	Brick-kilns.
„ G. S., & Bowen, F. A. (Lake)	726	Feb. 22	Ore-separators.
Redwood, C. - - - - -	801	Feb. 26	Purifying and separating middlings.
„ T. B. - - - - -	2591	June 23	Making gas for burning
Rees, D. - - - - -	1976	May 11	Compounding calves'-feet jelly tablets.
„ E., & Gledhill, F. R. - - -	778	Feb. 24	Steam-boilers and furnaces.
„ T. H. - - - - -	2466	June 14	Producing designs on metal plates.
Reeves, A. - - - - -	317	Jan. 26	Show-card and picture-frames.
„ F. W., & Beattie, F. H. - - -	1754	Apr. 26	Excavating or elevating sand, &c.
Reichenheim, R. - - - - -	3050	July 29	Preparing hare skins for dress.

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Reid, J. - - - - -	2220	May 26	Shives for casks, &c.; union-joints.
" R. - - - - -	1431	Apr. 4	Smoothing-irons.
" W. - - - - -	4629	Nov. 30	Sewing-machine shuttles.
" W., & Simpson, H. - - - - -	3581	Sep. 12	Fastenings and framework of leggings, bags, &c.
Reidly, J. - - - - -	1182	Mar. 20	Pick or pickaxe.
Reilly, J. - - - - -	4936	Dec. 21	Counting machines for turnstiles, &c.
Reimer, K. - - - - -	1278	Mar. 25	Obtaining aldehyds from phenols..
Reinherr, F. (Wirth) - - - - -	356	Jan. 28	Locomotives.
Reisert, E. - - - - -	2007	May 12	Weighing cereals, &c.
Remfry, J. E. - - - - -	2792	July 8	Condensation of steam.
Remington, E. & Sons (Lake) - - - - -	2959	July 20	Securing and removing caps, &c. in cartridges.
Remus, T. (Wirth) - - - - -	3626	Sep. 16	Packing-rings and making same.
Remy, E., & Denjs, J. - - - - -	3517	Sep. 7	Extracting starch from rice, &c.
Render, F. - - - - -	4973	Dec. 23	Manufacture of flour.
Renette, J. F. G. - - - - -	1234	Mar. 23	Fire-arms.
Rennes, D. W. van - - - - -	1304	Mar. 27	Caloric-pump and motor-engine.
Rennie, G. B. - - - - -	1572	Apr. 13	Steam-ferry boats and landing stages.
Renouf, T. W. S. - - - - -	2376	June 7	Screw-propellers.
Renoult, E. - - - - -	1921	May 8	Driving-bands.
Renshaw, D. (Renshaw) - - - - -	2881	July 14	Steam-generators.
Renshaw, R. (Renshaw) - - - - -	2881	July 14	Steam-generators.
Renton, R. - - - - -	4801	Dec. 12	Parallel vices.
Requa, E. B., & Cristodoro, J. (Richards) - - - - -	4406	Nov. 14	Nozzles for bottle-stoppers.
Reunert, J., & Suck, O. (Redfern) - - - - -	3370	Aug. 28	Gas-motor engines.
Reynolds, E. - - - - -	4015	Oct. 18	Centrifugal pumps and fans.
Reynolds, J. R., & Pratt, F. A. (Lake) - - - - -	1274	Mar. 24	Varnishing cartridge shells.
Reynolds, T. (Murphy) - - - - -	572	Feb. 12	Extinguishing fires.
" T. (Davis & Pusey) - - - - -	2560	June 21	Carriage wheels.
Reynoso, A. F. C. (Hunt) - - - - -	3593	Sep. 13	Preserving alimentary matters.
Rhett, R. - - - - -	4799	Dec. 12	Volute spring-motors.
Rhodes, B. & T. B., & Stoney, J. R. - - - - -	774	Feb. 24	Loom-pickers.
" B. & T. B., & Stoney, J. R. - - - - -	4338	Nov. 9	Making felt.
" S. G. - - - - -	3353	Aug. 26	Finishing yarn and fabrics.
" T. B. & B., & Stoney, J. R. - - - - -	774	Feb. 24	Loom-pickers.
" T. B. & B., & Stoney, J. R. - - - - -	4338	Nov. 9	Making felt.
Rice, G. C. - - - - -	2967	July 21	Placing mourning bands on hats.
" G. C., & Walker, J. A. - - - - -	2356	June 6	Raising and discharging liquids, &c.
Rice, I. L. G., & Bent, W. T. (Henderson) - - - - -	3518	Sep. 7	Winding, &c. yarn on to bobbins, and holding [ends of same in doffing.
" J. F. (Clark) - - - - -	1831	May 1	Charging gas-retorts.
Richards, D., Morris, E. S., & Morgan, [E. E. - - - - -	2611	June 24	Tempering sheet-iron plates.
" John - - - - -	341	Jan. 28	Sawing-machines.
" John - - - - -	368	Jan. 29	Cutting grooves in wood-work.
" John - - - - -	1331	Mar. 29	Making barrels and other vessels of wood.
" John - - - - -	4423	Nov. 15	Cut-nail and tack machinery.
" John, & Tandy, J. - - - - -	3853	Oct. 5	Solitaires, &c.; dress, bag, & jewellery fastenings.
" John M. - - - - -	3703	Sep. 21	Manufacture of pills.
" John M. (Robinson & Bo- [meister. - - - - -	3971	Oct. 14	Anchors.
" John M. (Requa & Cristodoro) - - - - -	4406	Nov. 14	Nozzles for bottle-stoppers.
" Johnson, Heyes, W., & [Hoyle, J. - - - - -	1869	May 4	Forming ceilings and walls.
" R. C. - - - - -	3424	Aug. 30	Appliance for uterine purposes.
" T. P. - - - - -	4040	Oct. 19	Circular sawing machinery.
Richardson, Catherine - - - - -	2936	July 18	Pleating or kilting machines.
Richardson, D. M. (Lake) - - - - -	991	Mar. 7	Scouring, polishing, &c. wheat.
Richardson, G. - - - - -	4749	Dec. 7	Boots and shoes.
Richardson, I. N. (Morgan-Brown) - - - - -	1383	Mar. 31	Playing cards.
Richardson, J. T. H. - - - - -	1482	Apr. 7	Wine-glasses or goblets.
" J. T. H. - - - - -	3899	Oct. 9	Spittoon for railway carriages, &c.
Richardson, L. (Lake) - - - - -	4588	Nov. 27	Couplings for pipes or tubes.
Richardson, W. H., & Couper, J. - - - - -	2817	July 11	Lenses.

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Riche, E. le - - - - -	1725	Apr. 24	Roller skate.
Rickard, W. T., & Symons, W. B. (Dann)	4948	Dec. 22	Roasting-furnaces.
Rickett, T. - - - - -	720	Feb. 21	Sleeve-links, solitaires, &c.
" T. - - - - -	1206	Mar. 21	Hydraulic draw-benches.
" T. - - - - -	1449	Apr. 5	Drawing steel tubes.
" T. - - - - -	3043	July 28	Making screws.
" T., & Hyatt, T. - - - -	3615	Sep. 15	Wood-screws and making same.
Rider, J., & Brown, E. - - -	5039	Dec. 29	Composition for preventing freezing in eng [&c., and for lubricating]
Ridgway, W. H. - - - - -	4046	Oct. 19	Encaustic tiles.
Ridout, R. H. - - - - -	3003	July 25	Galvanometers.
Riego, F. del - - - - -	4863	Dec. 15	Stirrups.
Riker, C. L. (Tongue) - - - -	4659	Dec. 1	Making ice and reducing temperature.
Riley, J. - - - - -	1366	Mar. 30	Soda-ash, &c., and furnaces for same.
" J. - - - - -	3972	Oct. 14	Shoes for horses or other animals.
Rimington, J. McN. - - - - -	1474	Apr. 6	Sewing-machine shuttles.
" J. McN., Bell, J. M., & [Branson, J. L.]	3415	Aug. 30	Knitting-machinery.
Ring, E. C. - - - - -	1086	Mar. 13	Roller skates.
Rippingille, E. A. - - - - -	2813	July 11	Lamps and lamp-stoves.
Ritchie, C. - - - - -	1940	May 9	Lighting, heating, and ventilating.
" C. - - - - -	4807	Dec. 13	Lighting, heating, and ventilating.
" E. S. - - - - -	2492	June 15	Compass cards and magnets.
" G., & Hawkins, J. - - - -	1508	Apr. 8	Doors and windows.
Ritter, F. W. - - - - -	3500	Sep. 6	Wine and other cocks or taps.
Ritz Brothers (Wirth) - - - -	2405	June 9	Malt-turning apparatus.
Rivers, E. G. - - - - -	4899	Dec. 19	Tubular boilers for heating buildings.
Rivière, A. (Gedge) - - - - -	4766	Dec. 11	Washing coal, ores, &c.
Robb, D., & Miller, J. F. - - -	657	Feb. 17	Making bolts.
Robertson, C. G. - - - - -	46	Jan. 5	Roller shoes and skates.
Roberts, A. - - - - -	649	Feb. 16	Indicating height of materials in furnace
Roberts, J. L., & Russell, H. G. (Clark)	4802	Nov. 28	Railway couplings.
Roberts, M. J. - - - - -	1152	Mar. 17	Safety-valves.
" M. J. - - - - -	1391	Mar. 31	Fish-plate for rails.
" M. J. - - - - -	1544	Apr. 11	Axles, shafts, &c., and lubricating same.
" M. J. - - - - -	2666	June 28	Driving sewing-machines, lathes, &c.
" M. J. - - - - -	3405	Aug. 29	Safety-valves.
" R. A. - - - - -	1496	Apr. 8	Roller skates.
" S., & Walker, W. - - - -	4367	Nov. 11	Card-clothing.
" T. W. - - - - -	1308	Mar. 27	Ventilating mines.
" W. H. - - - - -	1052	Mar. 10	Ascertaining a ship's true course.
Robertson, G. - - - - -	3124	Aug. 5	Exhausting gas; inducing currents.
" J. - - - - -	3566	Sep. 12	Stopping pumping-engines.
" J., & Blackie, J. K. - - -	1740	Apr. 25	Service cisterns and valves.
" R., & Martin, H. - - - -	4821	Dec. 13	Horse-shoes and making same.
Robertson, R. S. (Lake) - - - -	3821	Oct. 2	Saws for cutting stone; securing diam [points or u
Robertson, T. - - - - -	2503	June 16	Steam-carriages for tramways, &c.
Robinson, A. H. - - - - -	2256	May 29	Roller skates.
" A. K. - - - - -	1286	Mar. 25	Cooking-ranges and stoves.
" C. S. - - - - -	3528	Sep. 8	Burners for mixing gas and air.
Robinson, C. S., & Goldsmith, G. -	3527	Sep. 8	Securing railway rails to chairs.
Robinson, G. H., & Kennedy, De L., & [Delamater, C. H. (Lake).]	3207	Aug. 14	Punch or projectile.
Robinson, James - - - - -	4395	Nov. 13	Washer for locking nuts of fish-plates.
" John - - - - -	808	Feb. 26	Signalling on railways and in trains.
" John - - - - -	1772	Apr. 27	Tube-stopper.
" Joseph - - - - -	2449	June 14	Combined musical instrument.
" Joy, & Settle, A. - - - -	5068	Dec. 30	Pin or pin winding-machines.
" R. - - - - -	724	Feb. 21	Securing door-knobs to spindles.
" R. C. - - - - -	4174	Oct. 28	Die for moulding clay, &c.
Robinson, R. M., & Domeisler, E. L. [Richards].	3971	Oct. 14	Anchors.

Name.	Number of Application.	Date of Application.	Subject.
Robinson, W. (Clark)	2847	July 12	Combined hames and horse-collar.
Robinson, W. E.	2069	May 16	Treating phosphatic minerals.
Robottom, A.	33	Jan. 4	Soap or saponaceous compounds.
" A.	1969	May 10	Preserving animal, &c. substances.
" H. M.	2913	July 17	Keyless watches.
Robson, A.	684	Feb. 18	Supporting scaffolding.
" H. R.	79	Jan. 7	Steam-boilers.
" J. T., & Thomas, D.	1441	Apr. 4	Cleaning chimneys or flues.
Roby, C. W., & Mitchell, J. C. (Johnson)	2845	July 12	Railway couplings.
Rocheman, E. (Peaud)	3450	Sep. 1	Asphaltum.
Rodger, A. W.	866	Mar. 1	Scotch bonnets.
" W.	1693	Apr. 21	Railway couplings and brakes.
Rödiger, F. (Gedge)	4594	Nov. 28	Railway wheels.
Roe, J. P., & Harvey, T. F.	2353	June 6	Railways.
Roekner, C. H.	2183	May 24	Evaporating liquids; generating steam; utilizing, &c. noxious gases.
Rœtger, W. C. A., & Wildes, G. H.	2745	July 5	Coal-shoots and weighing-machines.
Rogé, H. N., Porot, E., Baffoy, P. H., & Dupré, P. S. E. (Clark).	3823	Oct. 3	Treating grain, plants, &c. for preserving same.
Rogers, B. W.	972	Mar. 6	Cutters of screw-worming machines.
" B. W.	3250	Aug. 18	Braces for drilling.
Rogers, C. B. (Lake)	1640	Apr. 19	Brushes for cleaning tubes.
" C. D. (Lake)	1905	May 5	Making wood-screws.
" C. D. (Lake)	2129	May 19	Shaving, pointing, &c. wood-screws.
Rogers, C. E.	863	Mar. 1	Piano-fortes.
" C. E. H.	3640	Sep. 18	Disinfecting clothing, &c.
" J.	3532	Sep. 8	Box for pomatum, ointment, &c.
" J. B., & Anderson, S.	190	Jan. 18	Cork beds; life-preservers.
" J. H.	4228	Nov. 1	Cleansing woollen cloths for dyeing.
" J. W.	3392	Aug. 28	Operating boats on ship-board.
Rogerson, R.	2131	May 20	Tombstones, monuments, and coffins.
Rollason, J. G.	2940	July 19	Cord-holder for blinds, &c.
Rollins, J. G. (Covel)	179	Jan. 17	Sharpening saws.
Roman, E. C. (Hunt)	2943	July 19	Elastic-mattresses.
Roman, H.	4314	Nov. 7	Portable receptacle or box.
Romanet, Viscount de (Bonneville)	1721	Apr. 24	Glazing, &c. walls and compositions for same.
Roocroft, E., Harwood, G., & Scholes, [J. B.]	5036	Dec. 29	Clearing yarns or threads.
Rooke, J.	1212	Mar. 22	Roller skates.
Root & Jewett (Lake)	3984	Oct. 14	Stoves.
Root, J. B. (Lake)	4234	Nov. 1	Making metal pipes or tubes.
" J. B. (Lake)	4238	Nov. 2	Making metal pipes or tubes.
" J. B. (Lake)	4241	Nov. 2	Making metal tubes.
Roper, F.	2170	May 22	Shifting and setting thrashing-machines, &c.
" G.	5003	Dec. 27	Carding-engines.
Rose, A. (Jewitt)	3590	Sep. 13	Fluting or goffering machines.
" C. (Clark)	26	Jan. 3	Scouring, &c. hides and skins.
Rose, C., & Rowles, G.	2925	July 17	Tricycles.
" L.	2773	July 7	Bottles and stoppers.
" T.	625	Feb. 16	Producing, &c. ice-rinks.
" T.	3781	Sep. 28	Button-hole stitching apparatus.
Rosenbaum, J. (Betzold)	744	Feb. 23	Colours for printing, dyeing, &c.
Rosenfeld, Bros. & Co. (Guiterman)	4686	Dec. 4	Holders or bases for inkstands, &c.
Rosenthal, W.	4640	Nov. 30	Busks for stays and corsets.
Roser, N. (Newton)	200	Jan. 18	Steam-boilers.
Ross, J. A. G.	1550	Apr. 12	Motive-power.
" O. C. D.	661	Feb. 17	Refrigerating apparatus for carriages, &c.
Rössier, S. (Wise)	192	Jan. 18	Making bleached ozokerite.
Rost, L. O. (Lake)	4589	Nov. 27	Railway carriages and brakes.
Roswag, C., & Geary, H.	4426	Nov. 15	Treating impure lead and products of same.
Roth, E. (Spence)	2864	July 13	Guiding files in saw-cutting.
Rothenheim, S.	3609	Sep. 15	Coarse fabrics for hygienic purposes, &c.
Rotheray, C., & Statham, J.	4348	Nov. 10	Packing leathers for hydraulic purposes.

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Rothwell, F. & T., Shepherd, E., & Hough, J. E.	4693	Dec. 5	Sewing-machine tables and stands.
„ T. & F., Shepherd, E., & Hough, J. E.	4693	Dec. 5	Sewing-machine tables and stands.
„ W., Battinson, A., Sutcliffe, W., & Murgatroyd, J.	1861	May 3	Weaving.
Rouart, S. H., & Mignon, J. B. J. (John-son).	54	Jan. 5	Presses.
Roucou, L. J.	2185	May 24	Liquid compound for bronzing, &c. meta
Rousseau, C. (Newton)	4117	Oct. 24	Obtaining pictures in colors.
„ D., & Smith, W. C. (Clark)	1866	May 3	Railway switches and signals.
„ L. (Tongue)	1657	Apr. 20	Motive-power engines for tram-cars, &c.
Roussel, A. P., & Peltier, P. D. (Clark)	3498	Sep. 5	Motive-power.
Rousselot, T. (Abel)	5050	Dec. 30	Sugar-cane mills.
Rowan, F. J.	4430	Nov. 16	Steam-engines and boilers.
Rowe, D. (Howe)	4992	Dec. 23	Tanning.
„ J. N.	1599	Apr. 15	Treating peat for fuel, &c.
Rowe, W. (Rowe)	4992	Dec. 23	Tanning.
Rowles, G., & Rose, C.	2925	July 17	Tricycles.
Rowley, J.	828	Feb. 28	Cutting and bundling wood.
„ R.	345	Jan. 28	Looped or knitted fabrics.
„ T.	4753	Dec. 8	Waterproof garments.
Rowlinson, W.	4517	Nov. 21	Armour-plates.
Roy, E. A.	4028	Oct. 18	Vessels for preventing sea-sickness.
„ J. W., Dorward, P., & Peall, O. F.	2359	June 6	Composition for curing plants of insects.
Royer de la Bastie, F. B. A. (Abel) .	1908	May 6	Tempering glass bottles, &c.
„ C. L. (Lake)	977	Mar. 6	Converting hides into leather.
„ P. C. (Palmer)	260	Jan. 22	Kilns for burning minerals,
Roylo, T., Simpson, R., & Brooke, A.	1851	May 2	Alizarine, &c.
Rubery, J.	2759	July 6	Wire for electric-telegraphs, &c.
Ruch, J.	564	Feb. 11	Extracting precious metals from metal w
Ruidant, A., Mulders, P. J., & De Meyer, C. J.	3726	Sep. 23	Composition or varnish.
Rule, T.	1289	Mar. 25	Bottles for aerated liquids, &c.
„ T.	2714	July 1	Stoppering bottles.
Rumbold, E.	4721	Dec. 6	Arresting, condensing, &c. vapours from
Rundell, J. & W. J.	4458	Nov. 18	Water-gauges for steam-boilers.
„ W. J. & J.	4458	Nov. 18	Water-gauges for steam-boilers.
Runkel, M.	1884	May 5	Cab-fare indicator.
„ M.	2393	June 8	Directing and controlling balloons.
„ M.	4365	Nov. 11	Key-hole protector.
„ M.	4941	Dec. 21	Lock; key for same.
Runnett, J., & Finch, W. W.	1188	Mar. 20	Feeder for nail-machines.
Rusett, E. W. de, & Chapman, C. . .	118	Jan. 11	Constructing ships.
Rushton, T. H., & Dobson, W. & B. A.	3712	Sep. 22	Carding fibres.
Rushworth, C., & Jowett, G.	3136	Aug. 8	Bottle-stoppers and securing same.
„ W.	3256	Aug. 19	Jar and bottle stoppers.
Russell, F. (Morgan-Brown)	2426	June 12	Pasting labels on cans and boxes.
„ H. G., & Roberts, J. L. (Clark)	4802	Nov. 28	Railway couplings.
Russell, J.	1608	Apr. 17	Steering and propelling ships, &c.
„ J. H.	4574	Nov. 25	Travelling bags and boxes.
„ T. (Scott)	1768	Apr. 27	Steam-boilers.
„ T. (Atkinson)	4585	Nov. 27	Charging and drawing gas retorts.
Ruston, J.	4714	Dec. 6	Traction and other engines.
Ruth, T. (Johnson)	163	Jan. 15	Stereotype plates, casts, and forms.
Ruthel, A.	3995	Oct. 16	Valve-gear for steam-engines.
Rutherford, J. H.	2616	June 24	Raising sunken vessels, &c.
„ W., & Mitchell, P.	4474	Nov. 18	Gripping tongs or "reachers."
Ruthven, J. F., & Somerville, J. . .	1877	May 4	Tramway rails and wheels.
Rutter, G. T., Hornsby, R., & Inno-cent, J.	2890	July 14	Mowing and reaping machines.
Ryder, T.	171	Jan. 15	Stop-motion for fibre-machines.
Rydill, G.	944	Mar. 4	Utilising waste heat in drying.

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Rydl, G. - - - - -	945	Mar. 4	Extracting fibres from woollen fabrics, &c.
" G. - - - - -	4696	Dec. 5	Dyeing piece goods, &c.; and utilising waste [products for treating sewage and manure.
" G. - - - - -	4785	Dec. 11	Reversible and imitation textile fabrics; extract- [ing and utilising refuse products.
" G. - - - - -	4848	Dec. 15	Treating sewage, extracting filtration; prepar- [ing disinfectants; manure.
Rye, W. M. - - - - -	950	Mar. 6	Controlling admission of steam.
Ryerson, V. B. (Lake) - - - - -	2669	June 28	Reducing cereals, &c. to flour.
Ryland, G. C. - - - - -	3525	Sep. 7	Railway chairs and railways.
S.			
Sa, P. de - - - - -	22	Jan. 3	Chimney pot.
Sabaté, I. D. (Brewer) - - - - -	2175	May 23	Glove for horticultural purposes, &c., and [cleaning coats of animals.
Sabell, J., & Carpenter, J. - - - - -	2781	July 8	Tandem dog-cart.
Sacc, F. H. L. C. (Ermatinger) - - - - -	423	Feb. 2	Preserving eggs.
Sachs, J. J. - - - - -	2529	June 19	Bleaching, &c. fibrous materials.
" J. J. - - - - -	3843	Oct. 4	Impregnating or exhausting fluids from sub- [stances.
Sack, O. (Redfern) - - - - -	1072	Mar. 11	Shaping screw-nuts, washers, &c.
" O., & Reunert, J. (Redfern) - - - - -	3370	Aug. 28	Gas-motor engines.
Sacré, C., Perkins, S., & Smellie, W. - - - - -	4611	Nov. 28	Iron blooms or ingots for railway rails, &c.
Saget, J. (Lake) - - - - -	1537	Apr. 11	Anvils for cartridges.
Sainsbury, H. (Morgan-Brown) - - - - -	1186	Mar. 20	Hardening wood.
St. George, T. C. B., & Colborne, Hon. J. - - - - -	1119	Mar. 15	Motive-power engine.
St. John, R. H. (Mills) - - - - -	321	Jan. 26	Sewing-machines.
" W. H. (Lake) - - - - -	1466	Apr. 6	Making, &c. combustible gases.
" W. H., & Groesbeck, D. (Lake) - - - - -	589	Feb. 12	Ventilating railway carriages, houses, &c.
Sainty, B. & J., & Hiscox, G. - - - - -	1127	Mar. 16	Separating grain and seeds.
" J. & B., & Hiscox, G. - - - - -	1127	Mar. 16	Separating grain and seeds.
Salamon, N. (Lippman & Lind) - - - - -	2403	June 9	Sewing-machines.
Salkeld, J., & Thomlinson, J. - - - - -	2373	June 6	Kilns.
Salmon, E., Sawrey, J. S., & Barnes, E. - - - - -	1890	May 5	Mangling, wringing, and drying.
Salmond, J. - - - - -	3030	July 27	Potato-lifter.
Samain, P. - - - - -	1571	Apr. 13	Rotatory engine.
Sambrook, W. - - - - -	4130	Oct. 25	Feed-water heaters for boilers, &c.
Sample, J. - - - - -	86	Jan. 7	Screw-propeller.
" J. - - - - -	3110	Aug. 4	Marine-engine governor.
" J., Grantham, J., & Waddle, M. - - - - -	936	Mar. 4	Railway-chair key.
Samson, W., & Barrie, P. - - - - -	473	Feb. 5	Bottle-stoppers.
" W. H. - - - - -	3254	Aug. 18	Cultivating land.
Samuelson, B., & Manwaring, W. G. - - - - -	682	Feb. 18	Harvesting-machines.
" B., & Manwaring, W. G. - - - - -	3578	Sep. 12	Harvesting-machines.
Sanday, W. - - - - -	2271	May 30	Planing and filing wood, &c.
Sanden, O., & Petzold, A. (Abel) - - - - -	3748	Sep. 26	Extinguishing sparks in steam-boiler flues, &c.
Sanders, H. C. - - - - -	4360	Nov. 11	Stoppers for bottles, jars, &c.
" J. H. & S. (Bernau & Sommer) - - - - -	1942	May 9	Furnaces.
" J. H. & S. (Bernau & Sommer) - - - - -	2222	May 26	Puddling furnaces.
" R. D. - - - - -	4735	Dec. 7	Brakes for railway carriages.
" S. & J. H. (Bernau & Sommer) - - - - -	1942	May 9	Furnaces.
" S. & J. H. (Bernau & Sommer) - - - - -	2222	May 26	Puddling furnaces.
Sandon, E. F. - - - - -	124	Jan. 11	Chaff-cutting machines.
Sandys, G. - - - - -	2092	May 18	Turning leaves of music, &c.
Sangster, J., & Grosvenor, W. S. (Lake) - - - - -	299	Jan. 25	Electro-magnetic regulators.
" J., & Grosvenor, W. S. (Lake) - - - - -	2423	June 12	Marine-engine governors.
" J., Clay, H. M., Van Vleck, [G. H., & Jawley, J. S. (Lake). - - - - -	857	Feb. 29	Fare-registers for tram-cars, &c.
Sankey, W., Wilson, F., & Mesnard, [G. H. - - - - -	2196	May 24	Roller skates.

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Sanson, R. B. - - - - -	1536	Apr. 11	Wheel or roller skates.
Sargent, F. G. (Thompson) - - - - -	2294	May 31	Washing wool.
Sargent, W. B., & Grosclaude, L. A. - - - - -	2969	July 21	Copying-press.
Sarony, O. - - - - -	1991	May 11	Bordering and ornamenting photographs.
Sarrazin, H. L. E., & Doisy, J. F. R. - - - - -	965	Mar. 6	Boot-jack.
Saunders, A. (Lake) - - - - -	2207	May 25	Cutting pipes.
Saunders, J. W. - - - - -	1974	May 11	Roller skates.
" R. - - - - -	1204	Mar. 21	Mooring vessels and floating structures.
Sauve, H. Julien-, & Krafft, L. - - - - -	4976	Dec. 23	Treating iron, Bessemer, Martin and other [metals for forming into steel.
Sauvée, A. (Cogniet) - - - - -	4107	Oct. 24	Treating ozokerit for paraffin, &c.
Saville, G. E. - - - - -	1074	Mar. 11	Gas-scrubber.
Savage, E. (Morgan-Brown) - - - - -	271	Jan. 24	Metallurgical furnaces.
Sawiczewsky, S., von, & Achtelstetter, T. - - - - -	1492	Apr. 7	Preserving meat.
[(Jensen).			
Sawkins, J. N. - - - - -	896	Mar. 2	Heating water, food, &c.
" J. N. - - - - -	910	Mar. 3	Hat and clothes pegs.
Sawrey, J. S., Barnes, E., & Salmon, E. - - - - -	1890	May 5	Mangling, wringing, and drying.
Sawyer, J. H. (Morgan-Brown) - - - - -	4766	Dec. 9	Mules or jacks for spinning.
" L. B. (Lake) - - - - -	1437	Apr. 4	Observatory or look-out towers.
" L. L., & Buckley, C. (Hughes) - - - - -	2343	June 3	Curtain fixtures.
Sax, J. - - - - -	2748	July 5	Water-tank gauge and alarm.
Saxby, F. E. - - - - -	2316	June 1	Valves for mains, pipes, &c.
Scaife, R., & Deiss, A. - - - - -	2868	July 13	Purifying india-rubber, amber, resin, bitumen, [sulphur, &c.
Scattergood, J. - - - - -	3253	Aug. 18	Railway spikes, cotters, or keys.
Schaefer et fils, F. (Clark) - - - - -	4808	Dec. 13	Ornamenting furs and feathers.
Schaffer & Fritz (Johnson) - - - - -	4302	Nov. 7	Cigarettes.
Schäffer, B. A., & Budenberg, C. F. - - - - -	560	Feb. 11	Steam-pressure gauges.
[(Budenberg).			
" B. A., & Budenberg, C. F. - - - - -	3035	July 28	Governors for steam-engines, &c.
[(Budenberg).			
" B. A., & Budenberg, C. F. - - - - -	3737	Sep. 25	Extinguishing sparks in locomotives, &c.
[(Wilson).			
Scharr, J. - - - - -	578	Feb. 12	Composition for lubricating wool.
Schaub, G. - - - - -	4269	Nov. 4	Electro-magnetic engines; generating electricity.
Schenk, A. O. - - - - -	4723	Dec. 6	Street tramways.
Schering, E. - - - - -	4553	Nov. 24	Salicylic acid.
Schierloh, H. (Lake) - - - - -	3482	Sep. 4	Making steel.
Schiffers, J. (Wirth) - - - - -	2822	July 11	Grease-boxes.
Schippmann & Dreyer (Mills) - - - - -	2324	June 2	Communicating motion to machines.
Schleh, E. (Strong) - - - - -	1480	Apr. 7	Slide-valves.
Schlenker, E. - - - - -	4071	Oct. 21	Screw-cutting and nut-tapping machine.
Schlenker, E. (Lake) - - - - -	2734	July 4	Paper-cutting machinery.
Schlesinger, A. A. - - - - -	2767	July 7	Churns; egg-beaters; freezers.
" A. A. - - - - -	3770	Sep. 28	Railway breaks.
" F. E., & Horrocks, J. - - - - -	4626	Nov. 29	Loom-pickers and picker-sticks.
Schmalz, L. E., & Corbin, E. A. (Johnson) - - - - -	4111	Oct. 24	Sugar-making.
Schmetzer, L. (Newton) - - - - -	2465	June 14	Toy figures.
Schmidt, Anna O. (Gedge) - - - - -	1683	Apr. 21	Safety-envelope.
" H. (Hansen) - - - - -	2769	July 7	Utensil, &c. for French polishing.
Schneble, M., & Wright, J. T. (Lake) - - - - -	2021	May 13	Packing for piston rods.
Schnell, J. F. - - - - -	2360	June 6	Lamps and generating gas for same.
Schock, E., & Ganz, R. (Spence) - - - - -	2705	July 1	Carding-engines.
Schock, G. (Clark) - - - - -	3031	July 26	Washing barrels, bottles, &c.
Schoenberg, A., & Wagner, F. X. (Clark) - - - - -	1548	Apr. 11	Sea-sounding and alarm-apparatus.
Scholes, E. - - - - -	4632	Nov. 30	Drying clay, sewage-deposit, &c.
" J. B., Roocroft, E., & Harwood, G. - - - - -	5036	Dec. 29	Clearing yarns or threads.
" J. H., & Chaffer, J. - - - - -	1024	Mar. 9	Loom-pickers.
" W. - - - - -	3193	Aug. 12	" Card backs " employed in carding.
Scholtz, A. (Wilson) - - - - -	2751	July 5	Recording performances of engines, &c.

Name.	Number of Application.	Date of Application.	Subject.
<i>Schönherr, L. (Newton)</i> - - - - -	122	Jan. 11	Looms.
<i>Schönrock, E. (Grüneberg)</i> - - - - -	3994	Oct. 16	Composition for extinguishing fire.
<i>Schooling, H.</i> - - - - -	1939	May 9	Safes.
<i>Schram, J. R.</i> - - - - -	119	Jan. 11	Rock-boring machines.
<i>Schramm, K. R., & Walker, G. O.</i> - - - - -	1888	May 5	Indicators.
<i>Schreiber, J. J. (Hirsch & Stern)</i> - - - - -	4855	Dec. 15	Locks.
<i>Schreiber, R.</i> - - - - -	3448	Sep. 1	Burners for mineral oil lamps.
<i>Schumacher, G. W.</i> - - - - -	1720	Apr. 22	Thermometers.
<i>Schuman, S.</i> - - - - -	2766	July 7	Streets, roadways, or floors.
" S. - - - - -	2972	July 21	Felted covers for bottles, &c.; felted goods.
<i>Schwartz, J.</i> - - - - -	2305	May 31	Sugar-making.
<i>Schwarz, T., & Sich, P.</i> - - - - -	3376	Aug. 28	Gas-regulating and saving apparatus.
<i>Scotfield, C. (Lake)</i> - - - - -	1561	Apr. 12	Straightening shafting tubes, rails, &c.
<i>Scollay, G. W. (Gedge)</i> - - - - -	4068	Oct. 21	Preserving food, &c.
<i>Scott, A., & Ogilvie, T. R.</i> - - - - -	1054	Mar. 11	Purifying sugar.
" B. C. - - - - -	3247	Aug. 18	Stoppering flasks and stoppers for same.
" C. - - - - -	2961	July 24	Fecal-closets and treating excreta.
" D., & Zoller, J. G. - - - - -	2496	June 16	Coverings for floors, roofs, and other surfaces, wagon-covers; hose or tubing, bags, slabs, [tables, cisterns, ridges, &c.]
<i>Scott, G. (Russell)</i> - - - - -	1768	Apr. 27	Steam-boilers.
<i>Scott, G. L.</i> - - - - -	3022	May 13	Roller skates.
" G. W. D. - - - - -	3225	Aug. 16	Steam-generators.
" H. B., & Welch, F. B. - - - - -	2362	June 6	Agitating and incorporating substances, &c.
<i>Scott, H. C. (Stevens)</i> - - - - -	4822	Dec. 13	Lamp wicks and burners.
<i>Scott, H. P. (Strickler)</i> - - - - -	3099	Aug. 3	Telegraph wires and cables.
" H. P., & Zerbe, B. H. - - - - -	3773	Sep. 28	Lubricants and packings, covering for steam-boilers, pipes, &c.
" H. Y. D. - - - - -	322	Jan. 26	Manures.
" James - - - - -	3959	Oct. 13	Raising, lowering, and transporting ships, &c.; [facilitating marine operations.]
<i>Scott, James (Stevenson)</i> - - - - -	1573	Apr. 13	Moulding concrete pipes or blocks.
<i>Scott, James C.</i> - - - - -	2507	June 16	Castors.
" James C. - - - - -	5041	Dec. 29	Presses.
" John, & Mirfield, M. - - - - -	479	Feb. 5	Combing fibres.
" John P. (Hartmann) - - - - -	4182	Oct. 28	Condenser carding-engines.
" M. - - - - -	4425	Nov. 15	Casting steel or converted metal.
" M., & W. M. - - - - -	615	Feb. 15	Fire-arms.
" R. - - - - -	3720	Sep. 23	Making edgings in twist lace machines.
" W. - - - - -	1350	Mar. 29	Roller skates.
<i>Scott, W. (Lake)</i> - - - - -	1719	Apr. 22	Cutting and folding paper.
<i>Scott, W. M.</i> - - - - -	4143	Oct. 25	Making coil and roll tobacco.
" W. M. & M. - - - - -	615	Feb. 15	Fire-arms.
<i>Scrutton, G.</i> - - - - -	1532	Apr. 11	Raising water; ships' pumps.
<i>Screw Co., American (Lake)</i> - - - - -	3998	Oct. 16	Shaving and nicking screws.
" Co., American (Lake) - - - - -	4891	Dec. 18	Screw-making machinery.
" Wire Co., American Cable (Lake) - - - - -	920	Mar. 3	Uniting boot-uppers, hose-tube seams, &c.
<i>Scrive-Viseur (Ledger)</i> - - - - -	4536	Nov. 22	Bobbins.
<i>Scully, R.</i> - - - - -	3715	Sep. 22	Composition ornaments for mouldings.
<i>Seaman, R., & Shepard, H. W. (Lake)</i> - - - - -	4290	Nov. 6	Shovels.
<i>Searle, W. H., & Eskrett, C.</i> - - - - -	3185	Aug. 11	Wrappers or envelopes for seed-crushing.
<i>Seck, W. (Barlow)</i> - - - - -	4663	Dec. 2	Ventilating cases of millstones.
<i>Sedgley, J. N.</i> - - - - -	4450	Nov. 17	Half-tester bedsteads.
<i>Sedley, A. J.</i> - - - - -	213	Jan. 19	Twin-ships.
<i>Seeland, F. F.</i> - - - - -	1423	Apr. 3	Treadles.
<i>Seigafin, C. B. (Brewer)</i> - - - - -	554	Feb. 11	Cases for toilet articles.
<i>Seibert, N. (Lake)</i> - - - - -	506	Feb. 8	Steam-engine lubricators.
<i>Seidel, C. (Pieper)</i> - - - - -	1652	Apr. 20	Trusses.
<i>Seligberg, A. (Tongue)</i> - - - - -	1729	Apr. 24	Bath tubs.
<i>Sellar, R., & Barclay, J. W.</i> - - - - -	2987	July 24	Cultivator and digger.
<i>Sellers, J. C.</i> - - - - -	1279	Mar. 25	Moulding artificial stone.
" J. C. - - - - -	3824	Oct. 3	Erecting concrete buildings.
<i>Sellers, C. & W. (Johnson)</i> - - - - -	1588	Apr. 13	Motive-power engines.

Name.	Number of Application.	Date of Application.	Subject.
<i>Sellers, C., W. & G. H. (Johnson)</i> -	2597	June 23	Shaping, welding, &c. metal.
„ <i>G. H., C. & W. (Johnson)</i> -	2597	June 23	Shaping, welding, &c. metal.
<i>Sellers, H.</i> - - - - -	3015	July 26	Staples for wire fencing.
„ <i>J.</i> - - - - -	1791	Apr. 28	Shuttles for weaving.
<i>Sellers, W. (Johnson)</i> - - - -	2844	July 12	Refining and condensing iron and steel.
„ <i>W. & C. (Johnson)</i> - - - -	1588	Apr. 13	Motive-power engines.
„ <i>W., G. H. & C. (Johnson)</i> -	2597	June 23	Shaping, welding, &c. metal.
<i>Semple, D.</i> - - - - -	3723	Sep. 23	String musical instruments.
<i>Sencier, G., & Legru, H. (Johnson)</i> -	4301	Nov. 7	Refining saccharine liquids, &c.
<i>Sergeant, J., & Jowett, J.</i> - - -	2188	May 24	Combing fibres.
<i>Sergent, Emilie, & Valkenhuizen, M.</i>	431	Feb. 3	Spheric-caster.
<i>Sergent, Emilie, & Valkenhuizen, M.</i>	3090	Aug. 2	Ball-caster.
„ <i>(Redfern).</i>			
<i>Serve, L. S. la (Lake)</i> - - - -	4494	Nov. 20	Lace-machines for making woven fabrics, &
<i>Servier, A. E. (Clark)</i> - - - -	1649	Apr. 20	Gas-retorts.
<i>Sessions, F. C., Jeffrey, J. A., & Lechner, F. M. (Haddan).</i>	1707	Apr. 22	Mining-machines.
<i>Settle, A., & Robinson, J.</i> - - -	5066	Dec. 30	Pin or pirn winding-machines.
<i>Seward, A.</i> - - - - -	4879	Dec. 18	Tube-boilers for heating buildings.
„ <i>N.</i> - - - - -	3676	Sep. 20	Apparatus for breathing warm air.
<i>Sewell, H. R., & Sweeney, G. (Brookes)</i>	2117	May 19	Fog-alarm.
<i>Seymour, J. C. (Bonneville)</i> - -	2051	May 16	Cleaning ships' bottoms.
<i>Shakespeare, J. D.</i> - - - - -	1510	Apr. 10	Miners' safety-lamps.
„ <i>W. H., & Wood, J. W.</i> - - -	1263	Mar. 24	Roller and ice skates.
„ <i>W. H., & Wood, J. W.</i> - - -	1478	Apr. 7	Railway signals.
„ <i>W. H., Thompson, W. P., & Wood, J. W.</i>	3171	Aug. 11	Railway signals.
<i>Shand, A.</i> - - - - -	3919	Oct. 10	Take-up mechanism for sewing-machines.
„ <i>J.</i> - - - - -	3916	Oct. 10	Hydrants or fire-cocks, valve for same.
<i>Shanks, F.</i> - - - - -	4388	Nov. 13	Hansom cabs.
„ <i>J.</i> - - - - -	631	Feb. 16	Portable steam-cranes.
<i>Shanley, T. J., Drinen, G. C., & Kehoe, J. (Clark).</i>	2260	May 29	Beer taps.
<i>Sharp, A. P., & Smith, P.</i> - - -	438	Feb. 3	Life-saving apparatus; converting sea-water [into fresh]
„ <i>H.</i> - - - - -	1386	Mar. 31	Moulding pipes, sewer-blocks, &c.
„ <i>S. H.</i> - - - - -	3132	Aug. 5	Splitting, shaving, &c. hides or skins.
„ <i>S. H.</i> - - - - -	3133	Aug. 5	Cutting leather into strips.
<i>Sharples, J. J., & Oldham, C.</i> - -	1780	Apr. 27	Looms.
<i>Shaw, B.</i> - - - - -	314	Jan. 26	Sanitary tubs or receptacles.
„ <i>H., & Edwards, E.</i> - - - -	3031	July 27	Metallic pens.
„ <i>James</i> - - - - -	167	Jan. 15	Steam-engines.
„ <i>James</i> - - - - -	1169	Mar. 18	Steam-engines.
„ <i>James</i> - - - - -	3732	Sep. 25	Rollers for expressing liquids from fabrics, &c.
„ <i>James</i> - - - - -	4864	Dec. 16	Velocipedes.
„ <i>John</i> - - - - -	2553	June 20	Kitchen-ranges.
„ <i>John</i> - - - - -	4818	Dec. 13	Operating valves of air-compressors.
„ <i>John, & Clark, W. T.</i> - - -	4887	Dec. 18	Operating valves of air-compressors.
„ <i>S. & T., & Smethurst, L.</i> - -	844	Feb. 29	Pressing woven or felted fabrics.
<i>Shaw, T. (Justice)</i> - - - - -	234	Jan. 20	Steam-engines; steam and vacuum brakes.
<i>Shaw, T., & Blackburn, W.</i> - - -	4482	Nov. 20	Measuring and drawing off liquids.
„ <i>T., & Heap, J.</i> - - - - -	4295	Nov. 7	Annealing pans.
„ <i>T., & Blackburn, W.</i> - - -	4979	Dec. 23	Measuring and drawing off liquids.
„ <i>T. & S. & Smethurst, L.</i> - -	844	Feb. 29	Pressing woven or felted fabrics.
„ <i>T. R., & Baxter, J.</i> - - - -	1504	Apr. 8	Packing for glands.
<i>Shaw-Brown, S.</i> - - - - -	4893	Dec. 19	Manufacture of lint.
<i>Sheath, G. F.</i> - - - - -	678	Feb. 18	Garden syringes.
<i>Shoffield, G. F., & Kalbfleisch, F. W.</i>	5058	Dec. 30	Uniting boot soles, leather cloth, &c.
„ <i>G. F., Fanning, J., & Kalbfleisch, F. W. (Morgan).</i>	2722	July 1	Boots and shoes; uniting leather, &c.
„ <i>G. F., Kalbfleisch, F. W., & Fanning, J. (Morgan).</i>	3437	Aug. 31	Sewing-machines for leather, &c.
<i>Sheldon, F. P. (Lake)</i> - - - -	134	Jan. 12	Screwing-machinery.

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Sheldon, H. N., Squire, J. R. M., & [Swett, A. O. (Bedford).	23	Jan. 3	Air-pistols.
„ H. N., Squire, J. R. M., & [Swett, A. O. (Quackenbush).	227	Jan. 20	Turning lathes.
„ J., & Stiff, W. C.	584	Feb. 12	Roller skates.
Sheldon, P. (Haddan)	3503	Sep. 6	Mining coal.
Shelmerdine, A.	2086	May 17	Velocipedes.
Shepard, A. D., & Atwood, A. (Clark)	1641	Apr. 19	Railway wheels.
„ C. H. (Clark)	1361	Mar. 30	Device for expanding hoofs.
„ H. W., & Seaman, R. (Lake)	4290	Nov. 6	Shovels.
Shephard, J. W., & Brough, W. . .	2404	June 9	Bathing-dress and life-saving belt.
Shepherd, E., Hough, J. E., & Rothwell, F. & T.	4693	Dec. 5	Sewing-machine tables and stands.
„ W., & Maxwell, W.	575	Feb. 12	Workmen's "tell-tale."
Sheppard, C.	1200	Mar. 21	Washing and purifying coal, &c.
Sheraton, A. B., Whippley, J. A., & [Bertraw, G. E. (Thompson).	1262	Mar. 24	Skates.
Sherry, C. C. (Wilson)	856	Feb. 29	Revolving or rolling shutters, &c.
Sherwin, G. E.	5056	Dec. 30	Crushing, grinding, mixing, &c. substances.
Shill, R. E.	310	Jan. 26	Steam and other boilers.
Shillinger, J. (Ettlinger)	3084	Aug. 2	Concrete pavement.
Shillington, D. F.	4892	Dec. 19	Case and desk for holding books, sheets, &c.
Shore, G. N., & Chubb, G. H. . . .	900	Mar. 2	Furnaces for steam-boilers, &c.
„ S. W.	4878	Dec. 18	Drawing corks from bottles.
Shorey, F. W.	4414	Nov. 14	Safety-valves.
Shorland, G. L.	1602	Apr. 15	Conveying voice and other sounds.
„ G. L.	3974	Oct. 14	Warming and ventilating; conveying sound.
Shorrocks, W.	18	Jan. 3	Dobby for weaving.
„ W., & Lewis, J.	1082	Mar. 13	Heald-springs.
Shutt, T.	4022	Oct. 18	Heel tips for boots and shoes.
Shuttleworth, J., & Clayton, N. . .	2982	July 21	Adjusting portable machinery; chocking wheels.
„ J., & Clayton, N.	3687	Sep. 20	Road-locomotives or traction-engines.
Siccardi, Count E. (Smith)	1374	Mar. 30	Telegraphs.
„ Le Comte E. de (Gardner) . . .	4081	Oct. 21	Submarine telegraphy.
Sidebotham, J.	2323	June 2	Constructing walls and buildings.
Sides, W., & Rayner, G. G.	4129	Oct. 25	Cutting and dressing rock.
Siégris, B. M.	4731	Dec. 7	Brakes for railway and other carriages.
Sieh, P., & Schwarz, T.	3376	Aug. 28	Gas-regulating and saving apparatus.
Siemens, C. W.	3714	Sep. 22	Producing iron and steel; furnaces for same.
„ F.	4780	Dec. 11	Manufacture of glass.
„ F., & Hesse, F.	3904	Oct. 10	Pottery ovens or kilns; utilising waste heat.
Sievier, J. C. H.	4085	Oct. 23	Gas-making.
Sigl, G. (Wirth)	456	Feb. 4	Raising liquids; blowing air; propelling ships; kneading dough, &c.
Silva, E. C. da (Tongue)	2558	June 21	Raising and forcing liquids.
Silver, E.	4162	Oct. 26	Lathes for wood turning.
„ I. (Mayer)	1688	Apr. 21	Screwing soles to boots, &c.; uniting leather.
Simcox, E.	2384	June 7	Taps and cocks.
„ E.	4115	Oct. 24	Taps and cocks.
Simey, C. R.	2776	July 7	Propulsion of vessels.
Simmonds, E.	4954	Dec. 22	Rendering walls, &c. impervious to wet.
Simmons, G. H., & Harrobin, W. T. .	311	Jan. 26	Cop-tubes.
„ [Morgan-Brown].			
Simmons, S.	4284	Nov. 6	Umbrellas.
Simmons, T. (East)	4502	Nov. 21	Atmospheric or aerating churns.
Simmons, W. A.	4087	Oct. 21	Printing cheques, &c. to prevent fraud.
Simpson, C. G. C. (Haddan)	2625	June 26	Dampening pads for copying books.
Simpson, F. H.	2136	May 20	Shirts.
„ G.	4951	Dec. 22	Making nails.
„ H.	131	Jan. 12	Travelling bags.
„ H.	1089	Mar. 13	Fastenings for leggings, bags, &c.
„ H.	1522	Apr. 10	Travelling bags, &c.
„ H., & Reid, W.	3581	Sep. 12	Fastenings and framework of leggings, bags, &c.

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Simpson, James - - - - -	3647	Sep. 18	Drums or casks and lids for same.
" John D. - - - - -	3363	Aug. 26	Breaking or reducing stones, &c.
" John E., & Cross, C. - -	1187	Mar. 20	"Indian kutar" cloth, &c.
" John T., & Smith, M. H. -	1919	May 6	Writing table and secretaire.
" Joseph - - - - -	2237	May 27	Steam-engines.
" Joseph - - - - -	4561	Nov. 24	Steam-engines.
" Richard, Brooke, A., & [Royle, T.	1851	May 2	Alizarine, &c.
" Robert - - - - -	3076	Aug. 1	Brewing and fermenting malt liquors, &c.
" W. S. - - - - -	3219	Aug. 15	Fire-arms.
Simon, E. (<i>Compagnie Dentellière de [France).</i>	4101	Oct. 23	Making lace (Malhère's system).
Simon, J. E. (Lake) - - - - -	3064	July 31	Removing hair, &c. from and preserving skin
Simon, L. - - - - -	3435	Aug. 31	Combined air and oil motive-power engines.
Simons, N. G. (Lake) - - - - -	1639	Apr. 19	Conveyers for grain, &c.
Simons, W. - - - - -	1068	Mar. 13	Steam ferry boats.
" W., & Brown, A. - - - - -	4382	Nov. 11	Hopper dredgers.
Sinclair, G. - - - - -	4778	Dec. 11	Boilers and stoking apparatus for same.
Singer, G. - - - - -	3983	Oct. 14	Bicycles.
Sinnatt, F. & W. H., & Lingard, T. W.	1469	Apr. 6	Bottle-stoppers.
" W. H., & Gallie, J. - - - -	3279	Aug. 21	Differential pulley blocks.
" W. H. & F., & Lingard, T. W.	1469	Apr. 6	Bottle-stoppers.
Sitwell, H. S. - - - - -	4777	Dec. 11	Swing-mirrors.
Sival, D. - - - - -	460	Feb. 4	Mechanical regulator.
Sival La Serve, L. (Lake) - - - -	4494	Nov. 20	Lace-machines for making woven fabrics, &c.
Skene, R. - - - - -	4803	Dec. 12	Ice-making and refrigerating.
Skillicorn, J. E. - - - - -	325	Jan. 26	Raising and lowering heavy bodies.
Slade, W. B. M., Haynes, T. H., & Moody, [J. M. (<i>Howe Spring Bed Co.</i>).	4862	Dec. 18	Spring-mattresses.
Slater, G. - - - - -	2595	June 23	Regulating force of springs.
" H. N. - - - - -	29	Jan. 4	Flocking cloth.
" J. - - - - -	3779	Sep. 28	Cask-making machinery.
" J. W. - - - - -	3095	Aug. 2	Deodorising and purifying sewage.
" J. W., & Rawson, C. - - - -	13	Jan. 1	Deodorising and purifying sewage.
" J. W., & Rawson, C. - - - -	1893	May 5	Purifying sewage, &c. and agents for same.
Slee, J., & Holford, H. - - - - -	4650	Dec. 1	Valves for steam and other engines.
Sleep, W. H. - - - - -	2429	June 12	Turn-wrest ploughs.
Slingsby, R. - - - - -	4385	Nov. 11	Photographic studios.
Sloan, J. T., & Frost, W. C. - - -	924	Mar. 4	Window-fasteners.
Sloan, T. J. (Lake) - - - - -	385	Jan. 31	Screws and screw-drivers; making screws.
" T. J. (Lake) - - - - -	2331	June 2	Making wood-screws.
Smale, W., Crickmay, E., & Farthing, [W. T.	1554	Apr. 12	Building-materials.
Small, J. H. - - - - -	489	Feb. 7	Tram-cars and omnibuses.
" J. H. - - - - -	4998	Dec. 27	Stable-floors.
Small, J. H. (Lake) - - - - -	3391	Aug. 28	Alarm-punch and register for conductors of [omnibuses, &c.
Small, J. H., & Marley, F. - - -	3651	Sep. 18	Recording arrival, &c. of tram-cars at stations.
Smalley, W. - - - - -	4874	Dec. 16	Looms.
Smellie, W., Sacré, C., & Perkins, S.	4611	Nov. 28	Iron blooms or ingots for railway rails, &c.
" T. H. - - - - -	624	Feb. 16	Steam-steering engines.
Smethurst, L., & Shaw, S. & T. -	844	Feb. 29	Pressing woven or felted fabrics.
Smiles, J. H. - - - - -	186	Jan. 18	Tubular steam-boilers.
Smiley, De W. C. - - - - -	2568	June 21	Refrigerators and cooling chambers.
Smith, Adam, & Musgrave, J. - -	1972	May 10	Steam-engines.
Smith, Ananias (Hunt) - - - - -	1312	Mar. 27	Burning lime or cement.
Smith, A. L. & H. A. - - - - -	556	Feb. 11	Railway wheels.
" A. Pyc-, White, O. W., & [Elliot, R.	1273	Mar. 24	Stable fittings and paving.
" B. - - - - -	47	Jan. 5	Electric signals.
Smith, B. F., & Bowman, W. K. (Lake)	4043	Oct. 19	Catching fish or game.
Smith, C. (Collins) - - - - -	513	Feb. 9	Filling lamps, &c.
Smith, C. E. (Clark) - - - - -	3274	Aug. 21	Smoothing planes.

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Smith, C. S.	993	Mar. 8	Dry closets or commodes.
" C. W.	2947	July 19	Scouring cloth, yarns, &c.; recovering products from scouring materials.
" D., & Bailey, I.	1248	Mar. 23	Combing fibres.
" D., & Steel, J.	3753	Sep. 26	Relieving sliver of tension in sliver, &c. cans.
" D. & L., & Bailey, I.	123	Jan. 11	Combing fibres.
" Edgar B.	3584	Sep. 13	Refrigerators and similar structures.
" Edward T.	2242	May 27	Roller skates.
" Elisha, & Nash, H.	1774	Apr. 27	Uniting tin and terne plates.
" Ernest	4079	Oct. 21	Folding and adjustable chairs.
" Francis & J.	4725	Dec. 7	Folding tables.
" Francis & J. (Wooton)	2231	May 27	Writing desks or tables.
" Frederick	2474	June 15	Union or coupling for pipes, &c.
" Frederick H.	528	Feb. 9	Lamp-wicks.
" Frederick H.	3421	Aug. 30	Lamps.
" G.	1716	Apr. 22	Looms.
" G. A., & Austin, J. B.	4700	Dec. 5	Rack for holding billiard cues.
" G. F.	4886	Dec. 18	Show-cases or trays.
" H.	1096	Mar. 13	Millstone casings, &c.
" H. A. & A. L.	556	Feb. 11	Railway wheels.
" James	1997	May 12	Plaiting, &c. attachment for sewing-machines.
" James	3898	Oct. 9	Mechanical stoking apparatus.
" James	4493	Nov. 21	Sanitary and other pottery-ware pipes.
" James & F.	4725	Dec. 7	Folding tables.
" James & F. (Wooton)	2231	May 27	Writing desks or tables.
Smith, Jason, & Foster, C. C. (Clark)	3735	Sep. 25	Tools for shaving, &c. leather edges.
Smith, John	1913	May 6	Water-gauges and cocks.
" John	4404	Nov. 14	Railway fog signal apparatus.
" John P.	1857	May 3	Buckled plates, &c. and forming same.
" John P.	2835	July 12	Cutting tool holders.
" John P.	4220	Nov. 1	Railways.
" John Y.	1587	Apr. 13	Ejectors for exhausting air.
" John Y.	3645	Sep. 18	Producing draught or current of air.
" John Y.	3936	Oct. 11	Ejectors for exhausting air.
" Joseph	1319	Mar. 28	Working railway signals, points, &c.
" Joseph	3425	Aug. 31	Sickles and wires of mules.
" Joseph & T. E.	1967	May 10	Gill-boxes.
" Joseph N.	27	Jan. 3	Axle-boxes and oilers.
" Joseph N.	2930	July 18	Axle-boxes and oilers.
" Lancelot, & Harrison, W.	4578	Nov. 25	Cordon soufflé interwoven with pillow lace.
Smith, Legrand B. (Johnson)	723	Feb. 21	Printing and ornamenting metal.
Smith, Leonard & D., & Bailey, I.	123	Jan. 11	Combing fibres.
" M.	845	Feb. 29	Horse-shoes.
" M. H.	170	Jan. 15	Supplying fuel to furnaces.
" M. H., & Simpson, J. T.	1919	May 6	Writing table and secretaire.
" P., & Walker, W.	4840	Dec. 14	Steam-engines.
Smith, P. E., Spruill, S. R., & Wood, [W. R. (Clark)]	4312	Nov. 7	Electric-light buoy.
Smith, R.	1326	Mar. 28	Keys for locks.
" R. C.	346	Jan. 28	Charging heavy guns.
" R. C.	2310	June 1	Charging heavy guns.
" R. C.	2613	June 24	Closing, &c. port-holes and working guns.
" R. C.	2808	July 10	Charging and firing heavy guns.
" S. (Fletcher & Wentworth)	2077	May 17	Doubling and twisting.
" S., & Emsley, S.	166	Jan. 15	Winding and gassing yarns.
" S., & Emsley, S.	1073	Mar. 11	Doubling and twisting.
" S., & Bottomley, J.	4253	Nov. 3	Spinning and doubling.
" S., Berry, B., & Emsley, S.	343	Jan. 28	Spinning.
Smith, S. M., & Becker, L. (Fyfe)	2411	June 10	Washing-machines.
Smith, T.	253	Jan. 21	Waterclosets and analogous apparatus.
" T.	4009	Oct. 17	Making reaping and mowing machine fingers.
Smith, T. (Gedge)	4200	Oct. 30	Material for paving, building, sleepers, &c.

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Smith, T., & Sharp, A. P. - - -	438	Feb. 3	Life-saving apparatus; converting sea-water [into fresh
" T., Harrison, H., & Foster, J.	1802	Apr. 28	Utilizing scrap-steel.
" T. E., & J. - - - - -	1967	May 10	Gill-boxes.
" T. J. (Crozet) - - - - -	464	Feb. 4	Calendar watches.
" T. J. (Siccardi) - - - - -	1374	Mar. 30	Telegraphs.
" T. J. (D'Heureuse) - - - - -	1684	Apr. 21	Mashing and disintegrating maize, &c.
" T. J. (Jamelin) - - - - -	2182	May 23	Lathe frames.
" T. J. (Wanzer) - - - - -	5025	Dec. 28	Casting metallic articles.
" T. J. (Horsey) - - - - -	5026	Dec. 28	Safety railway carriage trucks.
" Watson - - - - -	1081	Mar. 11	Engine-governors.
" William - - - - -	968	Mar. 6	Dry gas-meters.
" William - - - - -	2516	June 17	Making wire-netting.
" William - - - - -	3010	July 26	Fluid-meters; motive-power engines.
" William - - - - -	4975	Dec. 23	Mules for spinning.
" William, & Harper, R. R. -	3688	Sep. 20	Electro-magnetic signalling instruments.
" William, Butler, L., & Wright, [J. R.	1635	Apr. 19	Casting steel and iron.
" William A. - - - - -	363	Jan. 29	Obtaining, preserving, and packing sodium and [potassium; obtaining zinc
" William B., & Starley, J. -	547	Feb. 10	Wheel or roller skates.
" William B., & Starley, J. -	1164	Mar. 18	Roller skates, sledges, &c.
Smith, William C., & Rousseau, D. [(Clark).	1866	May 3	Railway switches and signals.
Smith, William F., & Coventry, A.	3654	Sep. 19	Carriers, pedestals, pulleys, &c., for shafting; [counter-shafting; making shaft
Smith, William H. (Johnson) - - -	2070	May 16	Artificial stone.
Smith, Willoughby (Baldwin) - - -	3856	Oct. 5	Protractor for ascertaining angles.
Smyth, Orianna S. (Jensen) - - -	4924	Dec. 20	Attaching paper sheets together to form book. [a
Smyth, R. - - - - -	884	Mar. 1	Roller skates.
Smythe, E. - - - - -	2079	May 17	Velocipede.
Snow, H. F. - - - - -	2251	May 29	Braces or suspenders.
" H. F. - - - - -	2571	June 21	Braces and stocking-supporters.
" J. J. - - - - -	439	Feb. 3	Kite-parachute.
Soar, W., & Hancock, S. - - -	3682	Sep. 20	Steam-boiler furnaces and flues.
Socin & Archinard (Bousfield) - - -	421	Feb. 2	Preserving telegraph posts.
Somerville, J., & Ruthven, J. F. -	1877	May 4	Tramway rails and wheels.
Soldano, Vee. de I. (Aulagnier) - - -	2578	June 22	Watches.
Solvay, E. - - - - -	999	Mar. 8	Carbonate of soda.
" E. - - - - -	1904	May 5	Carbonates of soda.
" E. - - - - -	2143	May 20	Carbonates of soda.
Somerville, J. - - - - -	2682	June 29	Valves.
" W. C. - - - - -	2115	May 19	Shifting machinery belts.
Sommer, G. O. A., & Bernau, R. (San- [ders & Sanders).	1942	May 9	Furnaces.
" G. O. A. & Bernau, R. (San- [ders & Sanders).	2222	May 26	Puddling furnaces.
Sonnenthal, G. (Linderhaus) - - -	2098	May 18	Safety belt-shipper.
Sowerbutts, A. - - - - -	888	Mar. 2	Aërated liquids.
Sowden, D., & Stephenson, R. C. -	3698	Sep. 21	Looms.
Soulice, R. (Le Lubez) - - - - -	596	Feb. 14	Grinding pepper-box.
Souter, W., & Entwisle, J. - - -	2692	June 30	Dressing, &c. silk waste and tow.
Southby, A. G. - - - - -	275	Jan. 24	Recovering alkali from waste leys used in [boiling vegetable fibre
" A. G. - - - - -	4298	Nov. 7	Automatic mashing-machines.
Southgate, C. J., & Luke, S. - - -	1938	May 9	Screw-propellers.
" T., & Woodward, J. - - -	117	Jan. 11	Fire-arms.
" T., & Woodward, J. - - -	600	Feb. 14	Fire-arms.
Southwood, W. - - - - -	68	Jan. 6	Making cut-nails.
Souttar, R. - - - - -	1261	Mar. 24	Tramways.
Souty, L. B. - - - - -	4332	Nov. 9	Sliding picture-frames.

Name.	Number of Application.	Date of Application.	Subject.
Spackman, Isabella A. - - - - -	114	Jan. 11	Lamps or lanterns.
Spalding, T. W., & Loughton, W. -	1819	Apr. 18	Treating caustic lye waste.
Spannagel, C. - - - - -	3797	Sep. 29	Hats, bonnets, &c.
Spanoghe, J. E. (Gedge) - - - - -	5015	Dec. 28	Smoke burning furnaces; producing steam.
Spartali, N. D. - - - - -	2906	July 15	Propelling ships or vessels.
" N. D. - - - - -	2923	July 17	Peat coke or charcoal.
Speakman, J. J., Greenwood, A., & [Davis, G. E.]	3673	Sep. 19	Collecting and treating excreta, &c. for pro- [ducts.]
Speirs, A. - - - - -	4405	Nov. 14	Tabular surface condensers.
Speller, H. - - - - -	1193	Mar. 20	Billiard cues.
Spence, P. - - - - -	278	Jan. 24	Sulphate of potash.
" W. (Schoch & Ganz) - - - - -	2705	July 1	Carding-engines.
" W. (Barter) - - - - -	2858	July 13	Cleansing and purifying middlings.
" W. (Roth) - - - - -	2884	July 13	Guiding files in saw-cutting.
" W. (Bernhard) - - - - -	4410	Nov. 14	An antitartaric lubricant.
Spencelayh, W. B., & Taylor, W. R.	2859	July 13	Steering gear for barges, &c.
Spencer, C. L., & Pingree, S. W. (Lake)	2543	June 19	Knitting-loom.
Spencer, G., & Stidolph, E. S. - -	2230	May 27	Bearing springs for carriages, &c.
" J. - - - - -	2176	May 23	Carriages.
" J. F. - - - - -	4834	Dec. 14	Steam-vessels.
" S., & Gillman, A. W. - - - - -	1335	Mar. 29	Bottling liquids.
" S., Mason, S., & Wolsten- [holme, J.]	4485	Nov. 20	Forming vacuum in paper-making machines.
" W. W. - - - - -	2127	May 19	Hats and other head coverings.
Spicer, G. H. - - - - -	1863	May 3	Making candles.
Spiers, L. C. - - - - -	400	Feb. 1	Fastenings for scarves, &c.
Spiller, A. F., & Holt, H. P. - - -	4171	Oct. 27	Lubricating skate rollers.
" F. E. - - - - -	3127	Aug. 5	Securing, &c. air-tight cases.
Spink, Elizabeth - - - - -	4845	Dec. 14	Compounds for curative purposes.
Spong, J. O. - - - - -	287	Jan. 25	Roughing horse-shoes.
Spour, W. - - - - -	1130	Mar. 16	Ratchet-braces.
Spring Bed Co., Howe (Moody, Slade, [& Haynes].)	4882	Dec. 18	Spring-mattresses.
Spruill, S. R., Wood, W. R., & Smith, [P. E. (Clark).]	4312	Nov. 7	Electric-light buoy.
Spruyt de Bay, C. - - - - -	2577	June 22	Propelling ships.
Spurr, C. W., & Prang, L. - - - -	446	Feb. 4	Veneering for ornamentation of furniture.
Squire, A. - - - - -	2749	July 5	Stopping tram-cars and all rolling stock.
" J. R. M., Swett, A. O., & [Sheldon, H. N. (Bedford).]	23	Jan. 3	Air-pistols.
" J. R. M., Swett, A. O., & [Sheldon, H. N. (Quackenbush).]	227	Jan. 20	Turning lathes.
" W. S. - - - - -	1770	Apr. 27	Sulphate of soda.
Stabler, J., & Parker, W. C. - - -	3572	Sep. 12	School furniture.
Stafford, T., & Watkinson, R. - - -	1823	May 1	Pipe joint; stoppering bottles.
Stainton, W. - - - - -	2901	July 15	Hot-water apparatus and preventing ice forming [in same when not in use.]
Standeven, E., & Fleming, H. - - -	1190	Mar. 20	Bottles, jars, and stoppers.
Stanfield, F. - - - - -	4434	Nov. 16	Tobacco-pipes and cigar-holders.
Stanhope, Hon. W. E. C. - - - - -	833	Feb. 28	Roller skates.
Stanley, E., & Harris, G. J. (Lake) -	4198	Oct. 30	Making paper bags.
Stannah, J. - - - - -	1730	Apr. 24	Donkey-engines and pumps.
Stanwix, H. - - - - -	1818	May 1	Grinding and polishing machines.
Staples, H. - - - - -	3307	Aug. 23	Purifying sewage, &c.; agents for same.
Stark, A. (Wirth) - - - - -	1928	May 8	Cooking-apparatus.
Starke, M. A. - - - - -	827	Feb. 28	Steam-engine expansion gear.
Starley, J., & Smith, W. B. - - - -	547	Feb. 10	Wheel or roller skates.
" J., & Smith, W. B. - - - - -	1164	Mar. 18	Roller skates, sledges, &c.
" J. & J. K. - - - - -	4478	Nov. 18	Velocipedes and other vehicles.
" J. K. & J. - - - - -	4478	Nov. 18	Velocipedes and other vehicles.
Starling, J. H., & Faulkner, J. A. -	3174	Aug. 11	Attaching knobs, &c. to spindles.
Startin, T. - - - - -	4267	Nov. 4	Folding carriage steps.

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Statham, J., & Rotheray, C.	4948	Nov. 10	Packing leathers for hydraulic purposes.
Stavers, G.	1488	Apr. 7	Steering, &c. vessels.
Stebins, T., & Howard, J. W. (Lake)	3544	Sep. 9	Hydraulic elevating machinery.
Steel, James	188	Jan. 18	Gas-making.
„ James	2933	July 18	Purifying gas.
„ James	3963	Oct. 13	Operating continuous brakes.
„ James	3965	Oct. 13	Purifying, &c. gas; extracting ammonia.
„ James, & McInnes, J.	1527	Apr. 11	Blast pipe exit for locomotives.
„ Joseph, & Smith, D.	3753	Sep. 26	Relieving sliver of tension in sliver, &c.
„ P., & Payne, C.	3973	Oct. 14	Securing scarf-pins, brooches, &c.
Steele, G. (Newton)	2594	June 23	Marine-engine governors.
Steenberg, A. (Bloch)	3327	Aug. 24	Advertising playing cards.
„ A. (Brevig)	4493	Nov. 20	Discovering leakage in ships.
„ A. (Falkman)	4926	Dec. 20	Apparatus for use in distilleries.
Steers, R., & Coxhead, F. C.	4646	Nov. 30	Making screw-heads.
Stevens, C. J., & Wallis, A.	4959	Dec. 22	Elevating and loading cut crops.
Steimmig, F. (Lake)	1454	Apr. 5	Crushing, &c. grain and minerals.
Stein, S. (Lake)	1609	Apr. 17	Making iron and steel.
Steinhaus, C., & Sürth, F. A. (Wilson)	1175	Mar. 18	Railway carriage couplings.
Steinmetz, B. (Johnson)	2798	July 8	Locks for bags, &c.
Steinmüller, C. & L. (Abel)	3646	Sep. 18	Steam-boilers.
„ L. & C. (Abel)	3646	Sep. 18	Steam-boilers.
Stenner, J.	1415	Apr. 1	Corn and manure drills.
Stephens, P. J. (Lake)	38	Jan. 4	Eye cups.
Stephenson, G., & Beard, W. J.	3915	Oct. 10	Washing-machines.
„ J.	1435	Apr. 4	Furnace fire-bars.
„ J.	2009	May 13	Securing railway wheel tyres.
„ R. C., & Sowden, D.	3698	Sep. 21	Looms.
Stern, H.	2246	May 29	Trimming hats.
„ M., & Hirsch, S. (Schreiber)	4855	Dec. 15	Locks.
Stevens, B. F. (Scott)	4822	Dec. 13	Lamp wicks and burners.
„ C. R.	1267	Mar. 24	Roller skates.
„ C. R., & Pound, J.	2031	May 15	Roller skates.
„ F.	4503	Nov. 21	Decorative mouldings for walls, &c.
„ J. J. F.	895	Mar. 2	Railway signals.
„ M.	4451	Nov. 17	Chimney tops and ventilators.
Stevenson, A.	1211	Mar. 22	Skating rinks.
„ F. H., & White, W. G.	622	Feb. 15	Roller skates.
„ G.	889	Mar. 2	Motive-power; air-compressing; rock-b [quarrying and m
„ G.	4213	Oct. 31	Excavating and depositing earth; crane
„ T.	1372	Mar. 30	Drain-pipes.
Stevenson, T. F. (Osborn)	3000	July 25	Lubricating apparatus.
Stevenson, W. (Scott)	1573	Apr. 13	Moulding concrete pipes or blocks.
Stewart, C.	1590	Apr. 13	Signalling in trains.
„ David	1505	Apr. 8	Treating horns, &c. for making articles.
„ David	4542	Nov. 23	Treating horns and hoofs.
„ Duncan	3428	Aug. 31	Balls for golf and other games.
„ R.	732	Feb. 22	“Lagging” for steam-boilers, ice-hous [safes, d
Stewart, T. E. (Lake)	561	Feb. 11	Rotary engines.
„ T. S. (Johnson)	2350	June 5	Gas-making.
Stidolph, E. S., & Spencer, G.	2230	May 27	Bearing springs for carriages, &c.
„ G. F. & T. F., & Delf, W.	2957	July 20	Cleaning and sorting seed, &c.
„ T. F. & G. F., & Delf, W.	2957	July 20	Cleaning and sorting seed, &c.
Stierlin, C. (Clark)	3194	Aug. 12	Railways.
Stierlin, G.	918	Mar. 3	Door spring.
„ G.	919	Mar. 3	Spring door hinge.
Stiff, W. C., & Sheldon, J.	584	Feb. 12	Roller skates.
„ W. C., & Bowen, A.	3845	Oct. 4	Making screws.
Stirling, C. E.	873	Mar. 1	Roller skates.
Stockman, F.	4319	Nov. 8	Lay-figures or dummies.

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Stocks, N.	4730	Dec. 7	Signalling in railway trains.
Stockwell, E. H.	979	Mar. 7	Flask and bottle stopper.
Stockwell, H. B. (McLean)	4427	Nov. 15	Lighting cigars and pipes.
" H. B., Merrill, J. W., & [Megill, E. L. (Turner).	1316	Mar. 27	Gas-lighting.
Stockwell, N. P. (Howe Machine Co.)	300	Jan. 25	Sewing-machines.
Stokes, B. H.	3957	Oct. 13	Driving sewing and similar machines.
" G. E.	432	Feb. 3	Skating floors.
Stone, R. (Johnson)	1746	Apr. 25	Railways and rolling stock.
Stone, T.	5031	Dec. 29	Furnaces for consuming smoke.
Stonehewer, W.	689	Feb. 18	Utilising old railway rails and like bars.
Stoney, J. R., & Rhodes, B. & T. B.	774	Feb. 24	Loom-pickers.
" J. R., & Rhodes, B. & T. B.	4338	Nov. 9	Making felt.
Storer, James	4904	Dec. 19	Jars or analogous vessels.
" John, & Pugh, C. H.	4967	Dec. 23	Retort lid fastenings.
Stothert, G. K., & Curtin, E. J.	568	Feb. 12	Low-water alarms.
Stott, H.	3234	Aug. 17	Ventilating steam-vessels.
Stotz, A., & Wohl, J. (Wirth)	2194	May 24	Roller skates.
Stover, H. D. (Lake)	760	Feb. 23	Cutting precious stones.
Straiton, J., & Johnstone, J. J.	185	Jan. 18	Cleaning skins.
Stratford, W.	3420	Aug. 30	Furnace doors.
Stratton, C., & Foust, J. W. (Lake)	4800	Dec. 12	Loading waggons with hay, &c.
Strick, J.	1915	May 6	Taking dimensions and measuring distances.
" J.	2617	June 24	Flexible coupling or joint.
" J., & Evans, W.	626	Feb. 16	Disintegrators.
Strickler, W. (Scott)	3099	Aug. 3	Telegraph wires and cables.
Strong, Alfred (Schleh)	1480	Apr. 7	Slide-valves.
" Anthony & J.	1225	Mar. 22	Furnaces and boilers.
" Anthony & J.	2424	June 12	Swimming appliances.
" J. & A.	1225	Mar. 22	Furnaces and boilers.
" J. & A.	2424	June 12	Swimming appliances.
" M. H.	858	Feb. 29	Gas-making.
" R. F.	3757	Sep. 26	Making railway chair keys.
Strong, T. J. (Clark)	5005	Dec. 27	Collecting, &c. sediment in steam-boilers.
Struhar, G. G. (Lake)	548	Feb. 10	Neck-ties.
Stuart, C.	949	Mar. 6	Taps or valves.
" C.	3612	Sep. 15	Fasteners for wood tenons or brush-handles.
" J. (Zentmayer)	3078	Aug. 1	Microscopes.
Stubbs, J., & Corrigan, J.	2579	June 22	Gassing and winding yarns.
" J., Corrigan, J., & Stutter, [E. H.	1347	Mar. 29	Threading eyes of shuttles.
" J., Corrigan, J., & Stutter, [E. H.	3870	Oct. 6	Threading eyes of loom shuttles.
Sturgeon, J.	630	Feb. 16	Steam-engines.
Sturme, W., & Beddow, S.	3403	Aug. 29	Locks.
" W., & Beddow, S.	3806	Sep. 30	Locks and making same.
Stutter, E. H., Stubbs, J., & Corrigan, J.	1347	Mar. 29	Threading eyes of shuttles.
" E. H., Stubbs, J., & Corrigan, J.	3870	Oct. 6	Threading eyes of loom shuttles.
" E. J., & Hicks, J. J.	668	Feb. 17	Rain-gauges.
Sudlow, W. E.	4466	Nov. 18	Steaming and setting fabrics.
Sugden, T., & Chadwick, T.	674	Feb. 18	Sewing-machines.
" Z., & Hartley, J.	138	Jan. 13	Lawn-mowers.
Sugg, W. T.	970	Mar. 6	Gas-burners and fittings.
" W. T.	971	Mar. 6	Gas-meters and connections.
Suisse, La Société Industrielle (Johnson)	1788	Apr. 28	Fire-arms.
Sumner, W.	894	Mar. 2	Preparing, spinning, doubling, &c. fibres.
" W., & Waldenström, E. H.	152	Jan. 14	Making metal tubes.
" W., & Waldenström, E. H.	4715	Dec. 6	Seamless metal tubes and rods.
Sunderland, H.	1700	Apr. 21	Crushing, grinding, or pulverising.
" H.	3935	Oct. 11	Crushing, grinding, or pulverising.
" H.	4697	Dec. 5	Crushing and pulverising ores, minerals, &c.

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Sunderland, W., & Bradley, E. & H.	1116	Mar. 15	Economizing fuel and consuming smoke.
Sürth, F. A., & Steinhaus, C. (Wilson)	1175	Mar. 18	Railway carriage couplings.
Susemihl, W. (Wise) - - - - -	2244	May 27	Exhausting and condensing steam.
Sutcliffe, H. & W. - - - - -	3128	Aug. 5	Plumbers' pipe-hooks.
„ T., & Fewings, J. - - - - -	24	Jan. 3	Bottling liquids; bottle-stoppers.
„ William, Fisher, W. R., & [Holt, C.	1574	Apr. 13	Thread-winder for sewing-machines.
„ William, Murgatroyd, J., [Rothwell, W., & Battinson, A.	1861	May 3	Weaving.
„ Wright & H. - - - - -	3128	Aug. 5	Plumber's pipe-hooks.
Sutherland, W. - - - - -	1269	Mar. 24	Staining, &c. wood and other surfaces.
„ W. - - - - -	4390	Nov. 13	Lock furniture.
Sutton, Richard & R. - - - - -	1933	May 9	Sail and roping twines.
„ Robert & R. - - - - -	1933	May 9	Sail and roping twines.
Swain, R., & Evans, G. - - - - -	4074	Oct. 21	Fire-proof floors and roofs.
Swaine, V. von (Lake) - - - - -	3613	Sep. 15	Elevating-machinery.
Swan, J. W. - - - - -	3631	Sep. 16	Stencils for autographic printing.
Sweeney, G., & Sewell, H. R. (Brookes)	2117	May 19	Fog-alarum.
Sweet, S. (Tongue) - - - - -	4326	Nov. 8	Mowing and reaping machinery.
Swett, A. O., Sheldon, H. N., & [Squire, J. R. M. (Bedford).	23	Jan. 3	Air-pistols.
„ A. O., Sheldon, H. N., & [Squire, J. R. M. (Quackenbush).	227	Jan. 20	Turning lathes.
Swift, W., Hunter, S., & Pickering, F.	4191	Oct. 30	Envelopes used in extracting oil.
Swinburn, J. F. - - - - -	3689	Sep. 20	Fire-arms.
Swinburne, T. A. - - - - -	1579	Apr. 13	Anchors.
„ T. A. - - - - -	2730	July 3	Anchors.
Swindells, I., & Lancaster, R. - - -	906	Mar. 3	Removing incrustation from steam-boilers, &c.
„ I., & Lancaster, R. - - -	2563	June 21	Obtaining chemical products from air, &c.
„ I., & Lancaster, R. - - -	3148	Aug. 9	Manufacture of ammonia.
Swinney, James, J. & T. - - - - -	1330	Mar. 28	Brick-making.
„ John, T. & J. - - - - -	1330	Mar. 28	Brick-making.
„ T. J. & J. - - - - -	1330	Mar. 28	Brick-making.
Switzer, T. - - - - -	331	Jan. 27	Riding-stirrup.
Syberg, Count S. de Playtor- (Pitt) -	3181	Aug. 11	Making copper articles.
Sykes, A., & Whiteley, W. - - - - -	3486	Sep. 5	Spinning and twisting fibres.
„ B., & Green, H. - - - - -	1379	Mar. 30	Roller skates.
„ B., & Green, H. - - - - -	1829	May 1	Roller skates.
Sykes, W., & Pullon, J. T. (Lee) - -	474	Feb. 5	Counting and registering apparatus for cars, &c.
Symes, G. - - - - -	4526	Nov. 22	Making, purifying, and economising gas.
Symington, R. S. - - - - -	2013	May 13	Electric-telegraphs.
„ W., & Nation, W. B. - - - - -	3679	Sep. 20	Treating paraffine.
Symons, W. B., & Rickard, W. T. (Dann)	4948	Dec. 22	Roasting-furnaces.
Syré, A. - - - - -	4473	Nov. 18	Range-finders.
Systermans, O. - - - - -	2762	July 6	Preventing guards falling off railway carriages.

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Tait, R. T. - - - - -	2645	June 27	Making tobacco.
Talbot, G. O. - - - - -	4229	Nov. 1	Safes and strong-room doors.
Tamin, J. M. O. - - - - -	4455	Nov. 17	Producing oxygenated, ozonised and azotised [atmospheres or baths, and gases for [impregnating volatile substances.
Tampier, L. (Ledger) - - - - -	3982	Oct. 13	Light-holder.
„ L. (Ledger) - - - - -	4830	Nov. 30	Displaying advertisements.
Tandy, J., & Richards, J. - - - - -	3953	Oct. 5	Solitaires, &c.; dress, bag, and jewellery [fastenings.
Tapley, J. P., Wilson, C., & Dore, W.	3167	Aug. 10	Sewing-machines.
Tarbutt, P. F. - - - - -	1033	Mar. 13	Roller skates.
Tanly, E. P. (Johnson) - - - - -	4206	Oct. 31	Attaching or securing armour-plates.

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<i>Tardy, E. P. (Johnson)</i> - - - - -	5062	Dec. 30	Protecting ships, &c. against injury from projectiles.
<i>Tasker, S. P. M.</i> - - - - -	1665	Apr. 20	Bending metal plates.
<i>W. (Duprez)</i> - - - - -	3468	Sep. 2	Cleansing and purifying grain.
<i>Taste, P. M. de la, & Leoni, F.</i> - - -	4953	Dec. 22	Ships and life-saving apparatus.
<i>Tatum, W.</i> - - - - -	217	Jan. 19	Emery-cloth, sand and glass paper.
<i>Taveau, E. (Henderson)</i> - - - - -	3263	Aug. 19	Broom-handle shield.
<i>Taverdon, C. L.</i> - - - - -	1985	May 11	Pumping, measuring, &c. liquids.
<i>Taylor, C.</i> - - - - -	1309	Mar. 27	Floor-cloth fabrics.
<i>Taylor, A.</i> - - - - -	3868	Oct. 6	Drain pipes.
<i>A., J. & B.</i> - - - - -	4444	Nov. 17	Hats.
<i>B., A. & J.</i> - - - - -	4444	Nov. 17	Hats.
<i>C. E.</i> - - - - -	1487	Apr. 7	Fire-lighters.
<i>E., & Bagnall, S.</i> - - - - -	3413	Aug. 30	Dress or curtain holder.
<i>F. D.</i> - - - - -	3121	Aug. 5	Fastening buttons to wearing-apparel, &c.
<i>G., & Bamford, W.</i> - - - - -	1996	May 12	Furnaces.
<i>H., & Greenwood, J.</i> - - - - -	3794	Sep. 29	Preparing fibres.
<i>H. E.</i> - - - - -	535	Feb. 10	Washing, sizing, &c. mineral substances.
<i>J., & Donaldson, R.</i> - - - - -	3754	Sep. 26	Winch or windlass for fishing-boats, &c.
<i>J., B. & A.</i> - - - - -	4444	Nov. 17	Hats.
<i>J. L., & Ramsden, R.</i> - - - - -	739	Feb. 22	Spinning mules.
<i>J. L., & Ramsden, R.</i> - - - - -	1397	Mar. 31	Spinning and doubling.
<i>J. L., & Ramsden, R.</i> - - - - -	3109	Aug. 4	Mules.
<i>R.</i> - - - - -	1957	May 10	Annealing iron plates for "black plate."
<i>T.</i> - - - - -	2333	June 3	Driving potters' lathes.
<i>Taylor, V. N., Hovey, W. H., & Curtis, T. A. (Hughes).</i> - - - - -	1827	May 1	Gas-light extinguisher.
<i>Taylor, W.</i> - - - - -	4013	Oct. 18	Constructing and ventilating vessels.
<i>W. R., & Spencelayh, W. B.</i> - - -	2859	July 13	Steering gear for barges, &c.
<i>Teale, W. E.</i> - - - - -	2351	June 5	Cleaning wire gauzes & other metal surfaces.
<i>Tebbs, R., & Blake, W.</i> - - - - -	4299	Nov. 7	Flower-pots.
<i>Tee, H.</i> - - - - -	1807	Apr. 29	Tell-tales.
<i>Teiter, P. (Wirth)</i> - - - - -	2067	May 16	Hoists and steam-hammers.
<i>Temple, G.</i> - - - - -	571	Feb. 12	Railway buffers and springs.
<i>Temple, J. M. F., du (Vaughan)</i> - - -	2003	May 12	Steam-boilers.
<i>Temple, T.</i> - - - - -	320	Jan. 26	Railway brakes.
<i>T.</i> - - - - -	4322	Nov. 8	Propelling vessels.
<i>T., & Atkinson, J.</i> - - - - -	588	Feb. 12	Communicating to engine-driver, &c. on trains.
<i>T., & Clark, W. & J.</i> - - - - -	1864	May 3	Hydraulic governor.
<i>Templeman, J.</i> - - - - -	306	Jan. 26	Fire-lighters.
<i>Templer, J. L. B.</i> - - - - -	990	Mar. 7	Raising, loading, stacking, &c. crops.
<i>Ten Brink, C. (Johnson)</i> - - - - -	3661	Sep. 19	Steam-boilers.
<i>Tenney, C. F., & Hobbs, T. J. (Lake)</i> - -	3088	Aug. 2	Children's carriages, chairs and tables.
<i>Terpeneau, J. A. (Gedge)</i> - - - - -	4060	Oct. 20	Portable photographic apparatus.
<i>Terry, R. K. (Bonneville)</i> - - - - -	3112	Aug. 4	Elevators for buildings.
<i>Testicuzzi, A., & Dussud, J. A. (Lake)</i> -	5019	Dec. 28	Umbrellas.
<i>Teste, A., père et fils, & Pichat (Clark)</i> -	5049	Dec. 29	Umbrella and sunshade fastenings.
<i>Tetlow, A.</i> - - - - -	3789	Sep. 28	Loom-shuttles.
<i>T., & Hutchinson, R. H.</i> - - - - -	4929	Dec. 21	Looms.
<i>Tetis, E. L. (Lake)</i> - - - - -	441	Feb. 3	Horse-shoes.
<i>Tew, F.</i> - - - - -	3190	Aug. 12	Braces or suspenders.
<i>Thacker, S.</i> - - - - -	88	Jan. 7	Gas-engines.
<i>Thackeray, J. L., & Glover, E.</i> - - - -	742	Feb. 22	Doubling silk, cotton, &c.
<i>J. L., & Glover, E.</i> - - - - -	2402	June 9	Doubling cotton, &c.
<i>Thallon, J., & Thornton, J.</i> - - - - -	1709	Apr. 22	Floor and wall coverings.
<i>M., & Whyte, J.</i> - - - - -	4681	Dec. 4	Manufacture or treatment of thread.
<i>Thamisch, F. A. N.</i> - - - - -	4744	Dec. 7	Assorting or dividing coins.
<i>Thatcher, E.</i> - - - - -	4053	Oct. 20	Shive-drawer.
<i>Thaulow, H. (Clark)</i> - - - - -	5048	Dec. 29	Manufacture of size.
<i>Thayer, A. P. (Clark)</i> - - - - -	669	Feb. 17	Motors for tram-cars, &c.
<i>Thayer, L. O.</i> - - - - -	2610	June 24	Fire-arms.
<i>Theiler, M. & R.</i> - - - - -	731	Feb. 22	Electric-telegraphs and electro-magnets.
<i>M. & R.</i> - - - - -	1011	Mar. 9	Registering and stamping tickets.

Name.	Number of Application.	Date of Application.	Subject.
Theiler, R. & M. - - - - -	731	Feb. 22	Electric-telegraphs and electro-magnets.
" R. & M. - - - - -	1011	Mar. 9	Registering and stamping tickets.
Thelen, J. (Abel) - - - - -	4875	Dec. 18	Preventing incrustation in and removing [deposits from pans for evaporating &
Thellot, J. - - - - -	2893	July 14	Treating petroleum oils; candles and sup.
Thiele, G. H. (Pieper) - - - - -	4890	Dec. 18	Sewing-machines.
Thierry, J. B. P. A. - - - - -	3218	Aug. 15	Smoke consuming apparatus.
Thiers, W. F., Jeffers, M. C., Beecher, [E. F., & Armstrong, A. P. (Mills).]	3585	Sep. 13	Ventilating, disinfecting, and fog-alarm for [ships, &
Thilmany, W. (Lake) - - - - -	1560	Apr. 12	Treating textile materials, &c. to prevent decay
Thiodon, A., & Hubbard, J. P. - - -	4664	Dec. 2	Fastenings for wearing-apparel.
Thirion, A. L. - - - - -	5046	Dec. 29	Construction of roofs.
Thirsk, D., & Anderson, A. - - - -	3463	Sep. 2	Grinding mill.
Thom, J., & Constable, J. - - - -	308	Jan. 26	Topping, tailing, &c. turnips.
Thomas, A. E. - - - - -	4500	Nov. 21	Three-high rolling mills.
" D., & Robson, J. T. - - - -	1441	Apr. 4	Cleaning chimneys or flues.
" D., Williams, D., Jenkins, J., [& Jones, J.]	1120	Mar. 15	Utilising old annealing pots of tin-plate work
" H. M. - - - - -	485	Feb. 7	Roller skates.
" Jeremiah - - - - -	459	Feb. 4	Weighing small coal, liquids, &c.
" John - - - - -	2875	July 13	Boilers and furnaces.
" John - - - - -	3953	Oct. 12	Roof-lamps.
" John, & Lawden, T. T. - - - -	2235	May 27	Fire-arms.
" John, & Lawden, T. T. - - - -	3291	Aug. 22	Fire-arms.
" John J. - - - - -	3161	Aug. 9	Separating liquids.
" John T. C., & Davis, C. J. - - -	1795	Apr. 28	Railway and other lamps.
Thomas, P. (Bonneville) - - - - -	533	Feb. 10	Treating zinc ores, &c.
Thomas, P. A. - - - - -	1434	Apr. 4	Roller skates.
" S. J. (Cavell) - - - - -	852	Feb. 29	Desulphurising, roasting, &c. ores.
" S. J. (Cavell) - - - - -	854	Feb. 29	Roasting and amalgamating ores.
" S. S. - - - - -	4415	Nov. 15	Hand and machine sewing needles.
" W. - - - - -	1850	May 2	Barred, ribbed and figured fabrics.
" W. - - - - -	2266	May 30	Lubricating wheels.
" W. - - - - -	3079	Aug. 1	Stays, bodices, or corsets.
" W. - - - - -	3080	Aug. 1	Making crinoline steel.
" W. - - - - -	3149	Aug. 9	Railway brakes.
" W. H. - - - - -	1943	May 9	Sewing-machines.
Thomasset & Driot (Lake) - - - -	4750	Dec. 8	Testing resistance of materials to tension, &c.
Thomlinson, J., & Salkeld, J. - - -	2373	June 6	Kilns.
Thompson, A. C. G. - - - - -	769	Feb. 24	Cleaning, softening, &c. fibres; rolling teas &c.
" A. C. G. - - - - -	4918	Dec. 20	Turning machinery and tools.
Thompson, G. & J. (Bullock) - - -	4000	Oct. 17	Skimmer attachments to ploughs.
" J. & G. (Bullock) - - - - -	4000	Oct. 17	Skimmer attachments to ploughs.
Thompson, J. B. - - - - -	2200	May 25	Smokeless furnaces and stoves.
" J. S. & W. - - - - -	1166	Mar. 18	Posts or standards.
Thompson, J. W. (Clark) - - - - -	3082	Aug. 1	Steam-engine indicators.
Thompson, N. - - - - -	1467	Apr. 6	Sash-fasteners or catches.
" N. - - - - -	2060	May 16	Sash-fasteners.
" N. - - - - -	2083	May 17	Stoppers for bottles, jars, &c.
" R. & W. - - - - -	1625	Apr. 18	Railway signals.
" R. W., & Lampitt, C. - - - -	2818	July 11	Dressing flour; purifying middlings, &c.
Thompson, T. (Lake) - - - - -	2735	July 4	Lowering ships' boats.
Thompson, W. - - - - -	4833	Dec. 14	Making prune wine.
" W. & J. S. - - - - -	1166	Mar. 18	Posts or standards.
" W. & R. - - - - -	1625	Apr. 18	Railway signals.
" W. H. - - - - -	4325	Nov. 8	Grinding, pulverising, and sifting substances
" W. P. (Cohen Lambert & [Leullier].)	663	Feb. 17	Indicating, &c. steam-pressure.
" W. P. (Leloup) - - - - -	981	Mar. 7	Preventing incrustation in steam-boilers, &c.
" W. P. (Berteaux, Sheraton, [& Whelpley].)	1262	Mar. 24	Skates.
" W. P. (Kips) - - - - -	2184	May 24	Portable cartouch for dressing wounds.
" W. P. (Sargent) - - - - -	2294	May 31	Washing wool.

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APPLICANTS FOR PATENTS FOR THE YEAR 1876.

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Name.	Number of Application.	Date of Application.	Subject.
Thompson, W. P. (<i>Marshall</i>) - - -	2765	July 7	Knitting-machinery.
" W. P. (<i>Anderson</i>) - - -	2909	July 15	Steam-boilers.
" W. P. (<i>Leloup</i>) - - -	3440	Sep. 1	Roller skates.
" W. P. (<i>Meresse</i>) - - -	4347	Nov. 10	Roller skates.
" W. P. (<i>Martin</i>) - - -	4476	Nov. 18	Screw-cutting apparatus.
" W. P. (<i>Margat</i>) - - -	4615	Nov. 29	Drawing off and measuring, &c. petroleum.
" W. P. (<i>Purvis</i>) - - -	4653	Dec. 1	Valves and valve casings for motive-power [cylinders.
" W. P., Wood, J. W., & [Shakespeare, W. H.	3171	Aug. 11	Railway signals.
Thomson, A. - - - - -	95	Jan. 8	Couplings for shafting.
" A. - - - - -	2014	May 13	Boots and shoes.
" D. - - - - -	5063	Dec. 30	Cutting up citron, candied lemon, &c.
" E. H. - - - - -	324	Jan. 26	Locks, bolts, &c.
" E. H. - - - - -	3304	Aug. 23	Counting and recording persons entering vehi- [cles, theatres, &c.
" E. H., & Whitehouse, E. O. W.	2248	May 29	Passenger registers for omnibuses, &c.
" R., & Porteous, J. - - -	4579	Nov. 27	Making tobacco.
Thomson, T. (<i>Lake</i>) - - - - -	4211	Oct. 31	Raising heavy weights.
Thomson, Sir W. - - - - -	1339	Mar. 29	Mariners' compasses and correcting same.
" Sir W. - - - - -	3452	Sep. 1	Deep-sea sounding apparatus.
" Sir W. - - - - -	4876	Dec. 18	Mariners' compasses and correcting same.
" Sir W., & Jenkin, F. - - -	1095	Mar. 13	Telegraphs.
" W. - - - - -	728	Feb. 22	Weighing-apparatus.
" W. R. M. (<i>Massie</i>) - - -	2888	July 14	Sewing-machine attachments.
" W. R. M. (<i>Mackenzie</i>) - -	3119	Aug. 5	Drying tea.
Thonger, C. - - - - -	1556	Apr. 12	Heating air for furnaces.
Thorburn, W. - - - - -	4042	Oct. 19	Washstands.
Thorn, A., & Fletcher, W. - - -	1621	Apr. 18	Roller or rink skates.
" C. - - - - -	2917	July 17	Carriages.
Thornton, A., J. & J., & Fenton, W.	1442	Apr. 4	Spinning fibres.
" A., J. & J., & Fenton, W.	2026	May 13	Spinning fibres.
" A., J. & J., & Fenton, W.	2027	May 13	Spinning fibres.
" Eliza A. (<i>Thornton</i>) - - -	711	Feb. 19	Balancing and supporting window-sashes and [shutters.
" James - - - - -	3776	Sep. 28	Wedding and other rings and marking same.
" James, & Thallon, J. - - -	1709	Apr. 22	Floor and wall coverings.
" John, J. & A., & Fenton, W.	1442	Apr. 4	Spinning fibres.
" John, J. & A., & Fenton, W.	2026	May 13	Spinning fibres.
" John, J. & A., & Fenton, W.	3027	May 13	Spinning fibres.
" Joseph, J. & A., & Fen- [ton, W.	1442	Apr. 4	Spinning fibres.
" Joseph, J. & A., & Fen- [ton, W.	2026	May 13	Spinning fibres.
" Joseph, J. & A., & Fen- [ton, W.	2027	May 13	Spinning fibres.
Thornton, T. (<i>Thornton</i>) - - - -	711	Feb. 19	Balancing and supporting window-sashes and [shutters.
Thorp, J. D. - - - - -	1651	Apr. 20	Screening coals, ores, &c.
Thorpe, C., & Prince, H. - - -	4668	Dec. 2	Direct-acting steam-pumps.
" C., & Prince, H. - - -	4717	Dec. 6	Condensers.
Thouvenin, L., & Birnbacher, Kunz, [& Co. (<i>Michaelson</i>).	994	Mar. 8	Artificial grinding stone.
Threlfall, L. - - - - -	2017	May 13	Closing swing and other doors.
Throop, J. W. (<i>Lewis</i>) - - - -	3446	Sep. 1	Railways.
" J. W. (<i>Mattison</i>) - - - -	4356	Nov. 10	Packing bags, sacks, tins, &c.
Thuau, C. L., & Plichon, A. J. (<i>Clark</i>)	4847	Dec. 14	Crucibles and portable furnaces.
Tibbs, J. - - - - -	2664	June 28	Mill furnaces used in making iron.
Ticehurst, F. W. - - - - -	1292	Mar. 25	Packing gunpowder.
Tidcombe, G., & Heaton, C. - - -	472	Feb. 5	Paper-making.
Tiemann, F. - - - - -	1661	Apr. 20	Vanilline.
Tilgmann, F. - - - - -	2600	June 23	Press for book and wall-paper printing.
Tillmanns, W. (<i>Hughes</i>) - - - -	2365	June 6	Revolving shutters and blinds.

Name.	Number of Application.	Date of Application.	Subject.
<i>Tillmans, W. (Hughes)</i> - - - - -	4688	Dec. 4	Revolving shutters and blinds.
<i>Tilton, G. W. (Tilton)</i> - - - - -	3844	Oct. 4	Purifying syrups, oils, and other liquids.
<i>Tilton, W. P. (Tilton)</i> - - - - -	3844	Oct. 4	Purifying syrups, oils, and other liquids.
<i>Timberlake, H. J.</i> - - - - -	618	Feb. 15	Velocipedes.
<i>Timewell, A. T.</i> - - - - -	339	Jan. 28	Skating floor.
<i>Timmins, E.</i> - - - - -	1220	Mar. 22	Furnaces for treating ores, alkalies, &c.
<i>Timperley, R., & Gillibrand, R. T.</i> -	4436	Nov. 16	Printing-machinery.
<i>Tindell, W. F. (Wheeler)</i> - - - - -	1324	Mar. 28	Making boxes, &c. of paper-pulp.
" <i>W. F. (Wheeler & Jerome)</i> - - -	3129	Aug. 5	Making boxes and hollow articles.
" <i>W. F. (Wheeler)</i> - - - - -	3774	Sep. 28	Making boxes, &c. from pulp.
<i>Tinsley, W.</i> - - - - -	2326	June 3	Bedsteads for invalids.
<i>Titley, T.</i> - - - - -	1085	Mar. 13	Screw-jacks.
<i>Todd, A.</i> - - - - -	4452	Nov. 17	Raising and lowering heavy bodies.
<i>Todd, J. (Lake)</i> - - - - -	3293	Aug. 22	Preventing smoke from furnaces.
<i>Tomkins, G.</i> - - - - -	3024	July 27	Making bricks.
<i>Tomkinson, M., & Adam, W.</i> - - -	3795	Sep. 29	Carpets and rugs.
" <i>M., & Adam, W.</i> - - - - -	4150	Oct. 26	Chenille rugs and making same.
" <i>M., & Adam, W.</i> - - - - -	4931	Dec. 21	Looms.
<i>Tommasi, F.</i> - - - - -	2528	June 19	Hydro-thermal compressor for use in steel-making.
" <i>F.</i> - - - - -	3830	Oct. 3	Hydro-thermic motive-power engine.
<i>Tompkins, R., & Carter, W. T.</i> - - -	1046	Mar. 10	Wheel or roller skates.
<i>Tongue, J. G. (Duchamp)</i> - - - - -	373	Jan. 29	Lamps.
" <i>J. G. (Clemens and the Eaton Cole & Burnham Co.)</i> - - -	1389	Mar. 31	Hose and pipe nozzles.
" <i>J. G. (Jollissaint-Vonèche & La Société Comte & Mabut).</i> - - -	1476	Apr. 6	Textile leather.
" <i>J. G. (Rousseau)</i> - - - - -	1657	Apr. 20	Motive-power engines for tram-cars, &c.
" <i>J. G. (Seligsberg)</i> - - - - -	1729	Apr. 24	Bath tubs.
" <i>J. G. (Webb & Hill)</i> - - - - -	1817	May 1	Fountain lamps.
" <i>J. G. (Da Silva)</i> - - - - -	2558	June 21	Raising and forcing liquids.
" <i>J. G. (Truffart)</i> - - - - -	2960	July 20	Raising fallen crops.
" <i>J. G. (Lacomme & Marville)</i> - - -	3158	Aug. 9	Seats, benches, &c. for advertising.
" <i>J. G. (Meusel)</i> - - - - -	3270	Aug. 19	Obtaining colouring matters from coal.
" <i>J. G. (Jacquel)</i> - - - - -	3784	Sep. 28	Screw-propellers.
" <i>J. G. (Montgomery)</i> - - - - -	4272	Nov. 4	Jars, bottles, flasks, &c.
" <i>J. G. (Sweet)</i> - - - - -	4326	Nov. 8	Mowing and reaping machinery.
" <i>J. G. (Montgomery)</i> - - - - -	4612	Nov. 29	Preserving, storing and transporting perishable articles.
" <i>J. G. (Riker)</i> - - - - -	4659	Dec. 1	Making ice and reducing temperatures.
" <i>J. G. (Montgomery)</i> - - - - -	5038	Dec. 29	Fast and loose pulleys.
<i>Tonnel, F. J., Wackernie, F. J., & Maurmant, J. E. M. J. (Mewburn).</i> - - -	2982	July 24	Throstle frame.
<i>Tooley, E. H.</i> - - - - -	3798	Sep. 29	Horse-rakes.
<i>Topham, G. O.</i> - - - - -	745	Feb. 23	Preventing personal injury in skating.
<i>Torr, C. W.</i> - - - - -	4489	Nov. 20	Metallic bedsteads and cots.
<i>Torrance, A. M.</i> - - - - -	498	Feb. 8	Marking piece goods.
<i>Torrey Montalbo, J. M. de la (De Aragon)</i> - - -	4199	Oct. 30	Hand and sewing-machine needles.
<i>Torres, H. C. de (Morgan-Brown)</i> - - -	2968	July 21	Injector for steam-boilers.
<i>Toselli, J. B. (Clark)</i> - - - - -	2757	July 5	Making tea, coffee, and other extracts.
<i>Toussaint, C.</i> - - - - -	468	Feb. 5	Bleaching cotton.
<i>Tower, B.</i> - - - - -	4104	Oct. 24	Indicating speed of marine engines.
<i>Townsend, J.</i> - - - - -	486	Feb. 7	Furnaces for steam-boilers, &c.
" <i>S.</i> - - - - -	286	Jan. 25	Furniture of umbrellas, &c.
" <i>S.</i> - - - - -	704	Feb. 19	Furniture of umbrellas, &c.
" <i>S.</i> - - - - -	4193	Oct. 30	Driving bands or cords.
" <i>S.</i> - - - - -	4718	Dec. 6	Bands or cords for driving machinery, support- [ing pictures, and connecting same.
<i>Townsend, S. S. (Johnson)</i> - - - - -	4628	Nov. 30	Making nut-blanks.
<i>Toy, S., & Hewitt, H.</i> - - - - -	1805	Apr. 29	Punching and pressing machine.
<i>Tozer, J. H.</i> - - - - -	2993	July 25	Railways.
<i>Trafford, W.</i> - - - - -	4	Jan. 1	Spinning, &c. and reeling silk.
<i>Tramier, L. H.</i> - - - - -	838	Feb. 29	Tanning hides or skins.

Name.	Number of Application.	Date of Application.	Subject.
<i>Transports et de Consignations, La</i> [<i>Société de Commission de</i> (Johnson).]	4852	Dec. 15	Furnaces or fire-places.
Trench, G., Mackie, S. J., & Faure, C. A.	2742	July 4	Explosives.
Trench, J. T. - - - - -	85	Jan. 7	Warming greenhouses, &c.; burning lime.
Trentanove, M. - - - - -	376	Jan. 31	Railway brake.
Treyvoux, F. (Clark) - - - - -	3680	Sep. 20	Air and water-proof fabrics.
" F., & Neyret, J. (Clark) - - - - -	1196	Mar. 20	Air and water-proof fabrics.
Tringuetta, C. - - - - -	2996	July 25	Propulsion of steamers, &c.
" C., & Damala, P. - - - - -	635	Feb. 16	Propulsion of steamers, &c.
Tronchon, P. A. - - - - -	3394	Aug. 28	Brakes for locomotive and other carriages.
Trouillet, A. (De Pass) - - - - -	3154	Aug. 9	Perforating paper, cardboard, metal, &c.
Trouvé, G. (Lake) - - - - -	524	Feb. 9	Galvanic-batteries.
Trow, J. - - - - -	4698	Dec. 5	Puddling iron and steel.
Truchot, Margaret L. M. (Lake) - - - - -	3513	Sep. 6	An improved shawl.
Truel, C., & Maurel, S. (Morgan-Brown).	4617	Nov. 29	Safety-valves.
Trueman, H. P. - - - - -	2549	June 20	Pricking and writing apparatus.
Truffart, L. F. S. (Tongue) - - - - -	2960	July 20	Raising fallen crops.
Tube Works, American (Lake) - - - - -	4938	Dec. 21	Hollow metal rolls and tubes.
Tuck, R. - - - - -	2349	June 5	Tool for mounting photographs, &c.
Tucker, B. W. - - - - -	4131	Oct. 25	Dredging-buckets and links for same.
" E., & Wallace, J. S. - - - - -	1592	Apr. 13	Ear-trumpet.
" G., & Hodgson, G. - - - - -	484	Feb. 7	Kilns for bricks, pottery, lime, salt-glazing, &c.
" H. C. - - - - -	1353	Mar. 29	Hanging window-sashes.
" H. C. - - - - -	1992	May 12	Facilitating locomotion on foot.
Tucker, S. D. (Conquest) - - - - -	543	Feb. 10	Folding paper.
" S. D. (Conquest) - - - - -	3019	July 26	Folding paper.
" S. D. (Conquest) - - - - -	4645	Nov. 30	Making up printed paper into books, news-papers, &c.
" S. D., & Hoe, R. M. (Conquest)	427	Feb. 2	Printing machinery; cutting, folding, &c. [sheets.]
Tucker, W. (Chamberlain) - - - - -	819	Feb. 28	Plaiting textile fabrics, paper, &c.
Tuer, A. W. - - - - -	3297	Aug. 22	Manifold copying.
Turnbull, A. - - - - -	3641	Sep. 18	Ballot apparatus for voting.
" A. - - - - -	4017	Oct. 18	Safety-valves.
Turner, A. D. - - - - -	2606	June 24	Sewing-machines.
" A. D. - - - - -	3863	Oct. 6	Burning hydro-carbons for lighting, &c.
" A. D. - - - - -	3911	Oct. 10	Sewing-machines.
" A. W., & Wilson, N. - - - - -	232	Jan. 20	Hair-dressing and horse-grooming apparatus.
" E. (Stockwell, Merrill, & Megill).	1316	Mar. 27	Gas-lighting.
" F. W. - - - - -	4445	Nov. 17	Steam-engines and other fluid motors; boilers.
" G. E. - - - - -	1343	Mar. 29	Roller skates; attaching skates.
" H. - - - - -	3478	Sep. 4	Raising sunken ships, &c.
" J. - - - - -	4255	Nov. 3	Velocipedes.
" J. - - - - -	5018	Dec. 28	Velocipedes.
Turner, J. (Webb) - - - - -	106	Jan. 10	Casting metals and metallic alloys.
Turner, S. - - - - -	2328	May 27	Making bricks or other plastic articles.
" T. - - - - -	898	Mar. 2	Rifles, cartridges, and projectiles.
" W. - - - - -	2210	May 25	Checking receipt of monies.
" W. T., & Whitaker, J. - - - - -	5040	Dec. 29	Motive-power.
Turnill, H. - - - - -	4742	Dec. 7	Steam-ploughs.
Turnley, R., & Murray, G. - - - - -	4092	Oct. 23	Locking nuts on bolts.
Turpin, M. F. C. - - - - -	3895	Oct. 9	Parquet-flooring.
Turquand, W. M. G. - - - - -	2743	July 4	Shearing or clipping sheep, &c.
Turton, S., & Allmann, J. - - - - -	173	Jan. 17	Low-water alarm for steam-boilers.
" T., & Latham, E. - - - - -	1457	Apr. 5	Steam-engine for raising, &c. weights.
" W., Walker, J., & Green, T. - - - - -	4738	Dec. 7	Stopping and starting gear for tram-cars, &c.
Tweddell, R. H., Platt, J., & Field-ing, J.	3134	Aug. 7	Hydraulic-presses for stamping, forging, &c.
" R. H., Platt, J., & Field-ing, J.	3665	Sep. 19	Hydraulic machine tools.
Twentyman, A. C. - - - - -	4633	Nov. 30	Fire-grates and furnace-grates.

Name.	Number of Application.	Date of Application.	Subject.
Tydeman, B. - - - - -	853	Feb. 29	Roller skates.
" B., & Davis, F. H. - - -	687	Feb. 18	Roller skates.
Tyer, E. - - - - -	557	Feb. 11	Communicating in trains.
" E. - - - - -	1408	Apr. 1	Railway brakes.
Tylor, A. - - - - -	1566	Apr. 13	Water-closets, &c., and water-supply apparatus [of same.
" A. - - - - -	2497	June 16	Water-supply apparatus for preventing waste.
" A. & J. J. - - - - -	730	Feb. 22	Apparatus for use in submarine operations.
" A. & J. J. - - - - -	4056	Oct. 20	Measuring and recording speed, quantity, &c. [of liquids, fluids, and powders, also velo-
" J. J. & A. - - - - -	730	Feb. 22	Apparatus for use in submarine operations.
" J. J. & A. - - - - -	4056	Oct. 20	Measuring and recording speed, quantity, &c. [of liquids, fluids, and powders, also velo-
Tyrer, P. (Lake) - - - - -	4242	Nov. 2	Extracting corks from bottles.
Tytherleigh, W., & Nash, Elizabeth	545	Feb. 10	Skates.
Tyzack, G. - - - - -	3940	Oct. 12	Anchors and making same.

U.

Ulbrich, C. (Hopff) - - - - -	2018	May 13	Removing burrs from wool.
Underhill, A. - - - - -	1565	Apr. 13	Roller skates.
" J., & Cartland, J. - - -	3989	Oct. 16	Cast metallic butt-hinges.
" J., & Cartland, J. - - -	4230	Nov. 1	Metallic butt-hinges.
Unsworth, T. - - - - -	1233	Mar. 23	Laying fibres in spinning, &c.
Unwin, T. - - - - -	3942	Oct. 12	Etching on glass.
Upton, J. - - - - -	3139	Aug. 8	Shoes for horses and other animals.
" W. - - - - -	2961	July 21	Fasteners for apparel.
Urquhart, J., & Andrews, W. W. -	104	Jan. 8	Gas-meters.
" W. W., & Lindsay, J. - -	1612	Apr. 18	Cutting or dressing stone, &c.
Urwin, J., & Carr, W. R. - - -	1288	Mar. 25	Brick-making.
Usher, H. & W. - - - - -	1195	Mar. 20	Roller skates.
" W. & H. - - - - -	1195	Mar. 20	Roller skates.

V.

Vacuum Brake Co., Empire (Johnson)	1538	Apr. 11	Air-brakes and ejectors.
Vaile, G. - - - - -	2699	June 30	Lubricating spindles, shafts, &c.
Valentin, W. G. - - - - -	2025	May 13	Dextrine-maltose.
Valentine, A. A., & Morrison, H. A. [Lake).	4719	Dec. 6	Umbrellas, parasols, sunshades, &c.
Valette, C. - - - - -	4679	Dec. 4	Printing cartes de visite and addresses.
Valkenhuizen, M., & Sergent, Emilie	431	Feb. 3	Spheric-caster.
Valkenhuizen, M., & Sergent, Emilie [(Redfern).	3090	Aug. 2	Ball-caster.
Vallon, G. du - - - - -	4254	Nov. 3	Using chains in pulley-blocks.
" G. du - - - - -	4266	Nov. 4	Steam-engine valves and working same.
" G. du, & Csete, J. - - -	4859	Dec. 15	Artificial production of ice.
Van den Berghe, P. L. (Mills) - - -	911	Mar. 3	Casting metals under pressure.
Vandendriesche, A. E. (De Combettes)	4036	Oct. 19	Gas-regulator for burners.
Vandepoel, G. (Brookes) - - -	3752	Sep. 26	Padlocks.
Van der Haeghen Limelette, R. J. P. [(Newton).	1068	Mar. 11	Vitreous colours.
Van der Kelen, L. - - - - -	4563	Nov. 25	Gas-stoves.
Vandesmet, A., & Lamboi, G. J. P. [(Newton).	1541	Apr. 11	Revivifying charcoal.

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<i>Van-Heers, G. T., & Bourquin, C. A.</i> [Clark].	3607	Sep. 14	Producing illuminated advertisements.
<i>Vanhorn, P., & Cranston, C.</i> (Lake)	2020	May 13	Paper-cutting machine.
<i>Vanner, J. E.</i> - - - - -	4179	Oct. 28	Silk-winding machinery.
<i>Van Oosterwyck, J. B.</i> - - - - -	3118	Aug. 5	Elevating liquids.
<i>Van Rennes, D. W.</i> - - - - -	1304	Mar. 27	Caloric-pump and motor-engine.]
<i>Vanstone, S., & Hoard, J. W.</i> (Morgan- [Brown].	4010	Oct. 17	Blanks for screws and threaded nails.
<i>Van Vleck, G. H., Javley, J. S., Sang- [ster, J., & Clay, H. M.</i> (Lake).	857	Feb. 29	Fare-registers for tram-cars, &c.
<i>Varley, S. A.</i> - - - - -	4905	Dec. 19	Electric-light apparatus, &c.
" S. A., & Bannehr, J. - - -	1739	Apr. 25	Intercepting and treating sewage.
<i>Vatcher, H.</i> - - - - -	1792	Apr. 28	Moulding pottery-ware, bricks, &c.
<i>Vaughan, A.</i> - - - - -	3601	Sep. 14	Padlocks.
" E. P. H. (Johnston Har- [vester Co.]	145	Jan. 13	Reaping and harvesting machines.
" E. P. H. (Frécot) - - -	249	Jan. 21	Fire-alarm and gas interceptor.
" E. P. H. (Frécot) - - -	266	Jan. 22	Brake for machinery.
" E. P. H. (Castegnier) - - -	1037	Mar. 10	Trousers-suspender.
" E. P. H. (Jouve) - - -	1293	Mar. 25	Sugar-making.
" E. P. H. (Du Temple) - - -	2003	May 12	Steam-boilers.
" E. P. H. (Johnston Har- [vester Co.]	2673	June 28	Binding grain.
" H. & T. - - - - -	3583	Sep. 13	Keys for locks and making same.
" T. & H. - - - - -	3583	Sep. 13	Keys for locks and making same.
" W. W., & Brown, W. & D.	690	Feb. 18	Unwelded tubes.
<i>Vautherin, J. A. J.</i> (Johnson) - - -	2093	May 18	Railways.
<i>Vanthier, E.</i> (Worms) - - - - -	2135	May 20	Printing in colors newspapers, magazines, &c.
<i>Vavasour, W. E.</i> - - - - -	939	Mar. 4	Applying force of gravity to machinery.
<i>Venables, W. J.</i> - - - - -	957	Mar. 6	Mechanical-telegraphs.
<i>Verdié, C.</i> - - - - -	395	Feb. 1	Making cast-iron and steel.
<i>Vernon, J.</i> - - - - -	2320	June 1	Toilet or wash-hand-stand services.
" J. - - - - -	3602	Sep. 14	Decanters, water-bottles, tumblers, &c.
<i>Very, T. S., & Flagler, H. K.</i> (Batchelder)	2339	July 12	Horse-shoe machines.
<i>Vickers, E. C.</i> - - - - -	96	Jan. 8	Boots, shoes, leggings, &c.
" T. - - - - -	1417	Apr. 1	Travelling bags.
<i>Vieille Montagne, Société de Mines et [Fonderies de Zinc de la</i> (Clark).	444	Feb. 3	Pulverising ores, &c.
<i>Viglino, J., & Donna, J.</i> (Morgan- [Brown].	3443	Sep. 1	Hydro-piro-pneumatic pump.
<i>Villiers, R. E.</i> - - - - -	735	Feb. 22	Rink skate.
<i>Vince, J. H.</i> - - - - -	569	Feb. 12	Compound for lubricating wool.
<i>Vincent, J. L. H.</i> (Gedge) - - - -	3750	Sep. 26	Seats for vehicles.
<i>Virtue, F.</i> - - - - -	3639	Sep. 16	Measuring, compressing, &c. oil seeds.
<i>Viseur, Serive-</i> (Ledger) - - - -	4536	Nov. 22	Bobbins.
<i>Visino, T.</i> - - - - -	4330	Nov. 9	Ascertaining and recording speed and direction [(latitude and longitude) of vessels.
<i>Vitrant, P. J.</i> (Brewer) - - - - -	1932	May 8	Looms.
<i>Vivian, J.</i> - - - - -	2607	June 24	Drilling or boring rock.
<i>Vleck, G. H. van, Javley, J. S., [Sangster, J., & Clay, H. M.</i> (Lake).	857	Feb. 29	Fare-registers for tram-cars, &c.
<i>Vogan, R.</i> - - - - -	2385	June 7	Sieves for grain and seeds.
<i>Vogel, J. B., & Bourron, W. L.</i> (Clark)	2937	July 18	Decorticating china-grass.
<i>Voigt, F. H.</i> (Haddan) - - - - -	2926	July 18	Chronometer escapements.
<i>Volant, Puvost, et fils, & Free, R.</i> - -	519	Feb. 9	Kilns for drying malt, &c.
<i>Völkner, C.</i> (Johnson) - - - - -	4713	Dec. 6	Malting and apparatus for same.
<i>Von Grubinski, F.</i> - - - - -	195	Jan. 18	Reaping and mowing machine.
<i>Von Castilberg, J. A. B.</i> (Petitpierre)	763	Feb. 23	Imitation marbles, &c.
<i>Vonèche, Jolissaint, & La Société Comte [& Mabut</i> (Tongue).	1476	Apr. 6	Textile leather.
<i>Von Nawrocki, G. W.</i> (Neumann) - -	2687	June 29	Hardening steel plates; safes.
" G. W. (Asbeck, Osthaus, [Eicken, & Co.]	2689	June 29	Armour-plates.

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Von' Nawrocki, G. W. (<i>Asbeck, Osthaus, Eicken, & Co.</i>).	2704	July 1	Uniting iron and steel.
" G. W. (<i>Drossbach</i>) -	4394	Nov. 13	Preparing flax, hemp, jute, &c.
" G. W. (<i>Brumlen</i>) -	4418	Nov. 15	Sulphuric and other mineral acids.
" G. W. (<i>Körting</i>) -	4420	Nov. 15	Sugar-making.
" G. W. (<i>Goliaach</i>) -	4660	Dec. 1	Pocket lantern.
" G. W. (<i>Heinemann</i>) -	4965	Dec. 23	Bevil tenon cutting machine.
" G. W. (<i>Bernstein</i>) -	4981	Dec. 23	Scales for testing coins by weight.
Von Nawrocki, G. W., & Brandt, J. (<i>Jensen</i>).	1810	Apr. 29	Galvanic-batteries.
Von Otter, C. G. (<i>Brewer</i>) - - -	2921	July 17	Signalling and telegraphing from ships, &c.
" C. G. (<i>Brewer</i>) - - -	2931	July 18	Signalling.
Von Sawiczewsky, S., & Achtelstetter, T. (<i>Jensen</i>).	1492	Apr. 7	Preserving meat.
Von Swaine, V. (<i>Lake</i>) - - - -	3613	Sep. 15	Elevating-machinery.
Vossnack, E. (<i>Barber</i>) - - - -	2306	June 1	Furnaces for steam-boilers, &c.
Voysey, C. (<i>Vyse</i>) - - - - -	3480	Sep. 4	Increasing stability, &c. of ships.
Vuillard, C. (<i>Oppenheimer</i>) - - -	291	Jan. 25	Smoking pipes and tubes.
Vyse, G. W. (<i>Voysey</i>) - - - - -	3480	Sep. 4	Increasing stability, &c. of ships.
W.			
Wackernie, A. E. (<i>Alexander</i>) - - -	3401	Aug. 29	Furnace fire-bars and actuating same.
" F. J., <i>Maurmant, J. E. M. J., & Tonnel, P. J. (Mewburn)</i> .	2982	July 24	Throstle frames.
Waddington, J., & Garside, W. - -	1005	Mar. 8	Admitting, &c. air to furnaces.
Waddle, M., Sample, J., & Grantham, J.	936	Mar. 4	Railway chair key.
Wadman, C. - - - - -	1736	Apr. 25	Chairs, seats, tables, &c.
Wadsworth, Harriet - - - - -	2724	July 1	Rendering boot soles more durable.
" J. & J. E., & Gags, O. - - -	4375	Nov. 11	Umbrella and parasol frames.
" J. E. & J., & Gags, O. - - -	4375	Nov. 11	Umbrella and parasol frames.
" T. Louisa (<i>Wadsworth</i>) - - -	4329	Nov. 9	Converting loose sugar into cubes.
Wadsworth, W. (<i>Wadsworth</i>) - - -	4329	Nov. 9	Converting loose sugar into cubes.
Wagner, F. X., & Schoenler, A. (<i>Clark</i>)	1548	Apr. 11	Sea-sounding and alarm apparatus.
Wagstaff, R. - - - - -	4077	Oct. 21	Chimney tops and ventilators.
Wahl, B. - - - - -	3976	Oct. 14	Composition for destroying vermin.
Wahlberg, A. W. (<i>Jensen</i>) - - -	2420	June 12	Treating nitrated alkalies.
" A. W. (<i>Jensen</i>) - - - -	2422	June 12	Explosive compounds.
Waide, F. W., Morgan, J. C., & Ma- [caulay, H.]	178	Jan. 17	Fire-places, stoves, &c.
Wain, J. - - - - -	3619	Sep. 15	Self-acting mules.
Waite, P., Greig, D., & Eyth, M. -	902	Mar. 2	Moving land.
Wakefield, J. - - - - -	4008	Oct. 17	Pointing, &c. rods for wire-drawing, &c.
Wakeman, H. - - - - -	4550	Nov. 23	Flexible tubing.
Waldenström, E. H., & Sumner, W. -	152	Jan. 14	Making metal tubes.
" E. H., & Sumner, W. - - -	4715	Dec. 6	Seamless metal tubes and rods.
Walder, J. - - - - -	2198	May 25	Roller skates.
Waldo, C. F. - - - - -	3763	Sep. 27	Supplying paper to printing-machines, &c.
Walduck, H. J. - - - - -	812	Feb. 26	Lime kilns or ovens.
Walford, E. J. - - - - -	4832	Dec. 14	Covering ships with plates, &c. for protection [same from injury]
Walker, A., & Cammack, J. - - -	903	Mar. 3	Sulphates of soda and potash.
" A., & Cammack, J. - - -	1513	Apr. 10	Heating, evaporating, &c. liquors and salts, &c. [oxidising, drying, &c. refuse of same]
" A. B. - - - - -	634	Feb. 17	Heating, cooling, distilling, &c.; malted [treating and converting grain into sugar]
" B. P. - - - - -	2589	June 23	Supplying fuel to furnaces, &c.
" C. C. - - - - -	2381	June 7	Planing and surfacing metals.
" G. - - - - -	4251	Nov. 3	Solitaires, shirt-studs, and like fastenings.

Name.	Number of Application.	Date of Application.	Subject.
Walker, G. A., <i>alias</i> J. G. A. - - -	721	Mar. 21	Cutting hedges and fences.
" G. O., & Schramm, K. R. - -	1888	May 5	Indicators.
" H. - - - - -	700	Feb. 19	Fire-arms.
" H. - - - - -	1272	Mar. 24	Fastenings for solitaires, gloves, bags, &c.
" H. - - - - -	1873	May 4	Scissors, shears, &c.
" H. - - - - -	2902	July 15	Needles.
" H. W., & Patterson, T. L. -	3520	Sep. 7	Treating residual liquids in making sugar.
" H. W., & Patterson, T. L. -	4069	Oct. 21	Treating residual liquids in making sugar.
" James & T. - - - - -	1276	Mar. 25	Leather for "insoles," &c.
" James A. - - - - -	340	Jan. 28	Maintaining level surfaces in ships, &c.
" James A. - - - - -	1647	Apr. 20	Counteracting movement of ships' cabins, &c.
" James A. - - - - -	4643	Nov. 30	Projectiles and bullets.
" James A. - - - - -	4724	Dec. 7	Fire-arms and sighting same.
" James A. - - - - -	4901	Dec. 19	Shears and scissors.
" James A., & Rice, G. C. -	2356	June 6	Raising and discharging liquids, &c.
" John - - - - -	747	Feb. 23	Door-locks and latches.
" John - - - - -	4109	Oct. 24	Fluid-meter.
" John - - - - -	4541	Nov. 23	Working healds in looms.
" John, & McCabe, J. - - -	2903	July 15	Looms.
" John, Green, T., & Turton, W.	4738	Dec. 7	Stopping and starting gear for tram-cars, &c.
" John C. & W. - - - - -	2232	May 27	Pins, needles, card and hackle teeth.
" John G. A., <i>alias</i> G. A. - -	721	Feb. 21	Cutting hedges and fences.
" M., & Hakes, T. - - - -	689	Feb. 19	Roller or wheel skates.
" S. - - - - -	1797	Apr. 28	Bottle-stoppers.
" S. - - - - -	2417	June 12	Stoppering bottles, &c.
" T., & Parker, J. H. - - -	143	Jan. 13	Loom-pickers.
" T., & Morton, J. - - - -	236	Jan. 20	Brace-buckles.
" T. & J. - - - - -	1278	Mar. 25	Leather for "insoles," &c.
" W. - - - - -	1594	Apr. 15	Alarm for ships at sea.
" W. - - - - -	1813	Apr. 29	Roller skates.
" W. - - - - -	2454	June 14	Bottle-stoppers.
" W. - - - - -	4996	Dec. 27	Motive-power engines; pumps; blowing cylinders.
" W. & J. C. - - - - -	2232	May 27	Pins, needles, card and hackle teeth.
" W., & Roberts, S. - - - -	4387	Nov. 11	Card-clothing.
" W., & Smith, P. - - - -	4840	Dec. 14	Steam-engines.
" W. J. - - - - -	785	Feb. 24	Roller skates.
Walkington, J. A. - - - - -	2226	May 26	Roller skates.
" R., & Broscōmb, J. H. -	2615	June 24	Preserving pencils, &c.
Wallace, J., & Ezard, C. - - -	5043	Dec. 29	Flat or smoothing irons.
Wallace, J. S. (Clark) - - - -	601	Feb. 14	Slide-valves.
Wallace, J. S., & Tucker, E. -	1592	Apr. 13	Ear-trumpet.
" R. W. - - - - -	1878	May 4	Fire-resisting compound.
" R. W. - - - - -	2154	May 20	Compound for making chemical vessels, &c.
" R. W. - - - - -	2285	May 30	Sulphuric anhydride, &c.; concentrating and refining acids.
" R. W., & Claus, C. F. - -	2950	July 19	Salts of barium, &c.; extracting silver.
" R. W., & Claus, C. F. - -	2951	July 19	Salts of zinc and applying same.
Wallan, J. - - - - -	4702	Dec. 5	Steam-boilers.
Wallerstein, S., & Meyer, J. (Lake)	1140	Mar. 16	Fastenings for wearing-apparel.
Wallington, A. - - - - -	1477	Apr. 7	Supporting skaters.
" A. - - - - -	1633	Apr. 19	Supporting skaters.
Wallis, A., & Steevens, C. J. -	4959	Dec. 22	Elevating and loading cut crops.
" C. E. - - - - -	2137	May 20	Roller skates.
" C. E., & Hayford, W. J. -	3373	Aug. 28	Roller skates.
" C. W. (Finco) - - - - -	3671	Sep. 19	Composition for paving, for walls, reservoirs, skating rinks, mantel-pieces, &c. ("Idrofuga.")
" J. - - - - -	1946	May 9	Theodolites.
Walmsley, J., & Frost, J. - - -	2048	May 15	Colouring fabrics to imitate skins, &c., and producing effects on natural skins and furs.
Walsh, J., & Farran, J. - - - -	3653	Sep. 19	Self-acting mules.
Walsh, J. E. & P. H., & Redden, H. (Clark).	2437	June 13	Securing mouths of grain bags, &c.

Name.	Number of Application.	Date of Application.	Subject.
Walsh, J. H. - - - - -	290	Jan. 25	Tricycle velocipedes.
" J. H. - - - - -	1114	Mar. 15	Roller skates.
Walsh, M. J. (Lake) - - - - -	4789	Dec. 11	Stowage of cotton, &c. in vessels and remor[...]
" P. H. & J. E., & Redden, H. [(Clark).]	2437	June 13	Securing mouths of grain bags, &c.
Walsham, J. - - - - -	4118	Oct. 24	Dress holders or suspenders.
Walton, F. - - - - -	420	Feb. 2	Floor-cloth.
" F. - - - - -	1901	May 5	Rectifying spirits.
" G. - - - - -	4088	Oct. 23	Stretching boots and shoes.
" J. T. - - - - -	855	Feb. 29	Drilling bolt-holes in rails.
" S. - - - - -	3967	Oct. 13	Locks.
" W. - - - - -	2832	July 12	Scoring billiards and other games.
" W. - - - - -	3459	Sep. 2	Scoring billiards.
" W. - - - - -	3634	Sep. 16	Grinding wire-cards.
" W. - - - - -	3694	Sep. 21	Grinding wire-cards.
" W. - - - - -	5032	Dec. 29	Self-acting gates for roads and railways.
Walworth, J. - - - - -	810	Feb. 26	Middlings separators or purifiers.
Wandless, W., Charlton, T., & Mearns, [J.]	3990	Oct. 16	Making horse-shoes.
Wanklyn, J. A., Archbold, G., & Cooper, [W. J.]	1172	Mar. 18	Distilling, &c. spirits.
Wanzer, R. M. (Smith) - - - - -	5025	Dec. 28	Casting metallic articles.
Warburton, H. G. - - - - -	3580	Sep. 12	Winding hosiery yarn.
Ward, F. D., & Pinkney, R. - - - - -	4470	Nov. 18	Printing or surfacing ink.
" H., J. & W. - - - - -	99	Jan. 8	Brick-making machinery.
" H., J. & W. - - - - -	4674	Dec. 2	Brick-making machinery.
" J. - - - - -	1371	Mar. 30	Looms.
" J. - - - - -	4479	Nov. 18	Ornamenting tapered tubes.
" J., W. & H. - - - - -	99	Jan. 8	Brick-making machinery.
" J., W. & H. - - - - -	4674	Dec. 2	Brick-making machinery.
" J. C. - - - - -	1828	May 1	Piano-fortes.
" J. C. - - - - -	1842	May 2	Musical instruments.
" T. B. - - - - -	3600	Sep. 14	Frames for stretching, &c. skirts.
" T. H. - - - - -	4294	Nov. 6	Cranes.
" W., H. & J. - - - - -	99	Jan. 8	Brick-making machinery.
" W., H. & J. - - - - -	4674	Dec. 2	Brick-making machinery.
Warde, R. A. - - - - -	960	Mar. 6	Railway carriage door handles, &c.
Warden, H. W. (Muirhead) - - - - -	1951	May 9	Igniting and extinguishing gas lamps.
Warden, T., Headly, E. P. G., & Hill, A. - - - - -	4467	Nov. 18	Implements for ridging, potato-raising, &c.
Wardwell, S. W. (Mills) - - - - -	66	Jan. 6	Sewing-machines and stands.
Ware, Ada S. - - - - -	4120	Oct. 24	Horse-rein holder.
Waring, J. B. (Copeland) - - - - -	2189	May 24	Rock-drilling machines.
Warner, G. P. (Clark) - - - - -	2261	May 29	Polishing buttons.
Warner, H. - - - - -	2525	June 19	Smelling and perfume bottles.
" W. J. - - - - -	751	Feb. 23	Indicating escape of gas and water.
Warren, C., & Carter, H. - - - - -	3858	Oct. 6	Roller skate.
" F. P. - - - - -	4621	Nov. 29	Cements for coating sea-going vessels, &c.
" F. P., & Field, E. - - - - -	3101	Aug. 3	Protecting ships, &c. from incrustation.
Warsop, G. - - - - -	2283	May 30	Roller skates.
Warth, H. - - - - -	3968	Oct. 13	Making common salt.
Warwick, J. - - - - -	2642	June 27	Sewing-machine shuttles.
" T. - - - - -	616	Feb. 15	Runners and top-notches for umbrellas, &c. [and ferrules for same]
Wassall, C. - - - - -	1663	Apr. 20	Stamped butt-hinges.
Waterhouse, W. D. (Archer) - - - - -	403	Feb. 1	Supplying water to houses, &c.
Waters, F., & Linton, F. S. - - - - -	2334	June 3	Roofing-tiles and keying same.
Waters, H. N., & Wilcox, E. N. (Clark) - - - - -	1464	Apr. 5	Feed-water heaters.
Waters, T. J. - - - - -	1141	Mar. 16	Making wood-screws.
Waterson, H. - - - - -	4943	Dec. 21	Ratchet-braces.
Watkin, H. S. S. - - - - -	4258	Nov. 3	Instruments for obtaining angles, &c.
Watkins, A. H., & Brown, F. A. (Lake) - - - - -	5002	Dec. 27	Engraving, &c. jewellers' & silversmiths' work
Watkins, J. - - - - -	1533	Apr. 11	Rollers for casters and skates.

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Watkins, W. B. (Lake)	505	Feb. 8	Fire and burglar alarm signals.
Watkinson, R., & Stafford, T.	1823	May 1	Pipe-joint; stoppering bottles.
" W., & Hempsted, R.	3008	July 26	Working cut-off slide-valves.
Watson, A. Y.	4806	Nov. 28	Coiling wire rope on drums.
" E., & Weatherby, C. P. N.	2935	July 18	Operating ladies' fans, &c.
" J.	494	Feb. 7	Handles of umbrellas, &c.
" J.	4203	Oct. 30	Treating and utilising sewage.
" J.	4392	Nov. 13	Pumps.
" J., & Chapman, A.	2729	July 3	Pressing cotton, &c.
" M.	861	Feb. 29	Lubricating corve axles and bearings, &c.
" M.	4919	Dec. 20	Making iron and steel.
" R. G., McKendrick, J., & [Ball, H. W.	3882	Oct. 7	Motor, pump or meter, and valves for same.
" W. R. (Weston)	3693	Sep. 21	Sugar-making.
Watteuw, C. A.	1247	Mar. 23	Rotatory steam-engine.
Watton, J.	2565	June 21	Operating boiler furnace dampers.
Watts, J.	1284	Mar. 25	Skating rinks.
" W.	4105	Oct. 24	Skate attachment to indicate traverse.
" W. J.	2808	June 24	Manual screw-propeller.
Waugh, J.	2997	July 25	Gathering, &c. root-crops and stones; embankment-making and road-grading.
Waymouth, S.	2977	July 22	Railway signals.
Wayne, R., & Johnson, J.	585	Feb. 12	Fire-arms.
Weare, J. H. & N. (Morgan-Brown)	3137	Aug. 8	Cooking-utensils.
" N. & J. H. (Morgan-Brown)	3137	Aug. 8	Cooking-utensils.
Weatherburn, R. & W. W.	2761	July 6	Extracting tubes and ferrules from boilers, &c.
" W. W. & R.	2761	July 6	Extracting tubes and ferrules from boilers, &c.
Weatherby, C. P. N., & Watson, E.	2935	July 18	Operating ladies' fans, &c.
Weatherdon, B. F., & Coles, R. F.	1020	Mar. 9	Roller skates.
" B. F., & McNabb, W.	2094	May 18	Boat and mode of employing same.
Weatherhogg, G. W.	113	Jan. 11	Steam-engines.
Weathers, G.	610	Feb. 15	A rotatory electric-light.
Weaver, W. (Neumann)	3741	Sep. 25	Boring or drilling rocks, &c.
Webb, C. B. S.	268	Jan. 24	Taps and valves.
" C. J. & R. T.	820	Feb. 28	Linen towelling and towels.
" F. W.	206	Jan. 19	Railway points and signals.
" F. W.	2352	June 6	Interlocking railway points and signals.
" L. S.	4712	Dec. 6	Wringing and mangling.
Webb, R. H., & Hill, J. R. (Tongue)	1817	May 1	Fountain lamps.
Webb, R. T. & C. J.	820	Feb. 28	Linen towelling and towels.
" T. G.	603	Feb. 14	Feeding furnaces.
" T. G.	2396	June 8	" Melting " or glazing glass articles.
" T. W.	2401	June 9	Vases and other glass articles.
" W.	2124	May 19	Separating sewage.
" W. (Turner)	106	Jan. 10	Casting metals and metallic alloys.
Webber, C. E.	3547	Sep. 9	Utilising gas for heating, &c.
Webster, E.	3516	Sep. 7	Fire-arms.
" G. E.	30	Jan. 4	Hosiery machines.
" W.	3993	Oct. 16	Detecting presence of gases in mines.
Weeder, J., & Bolt, J.	905	Mar. 3	Bottle-stoppers.
" W., Whitehead, W., & Bolt, J.	2203	May 25	Spoons.
Weems, W.	822	Feb. 28	Warming and ventilating buildings.
Wegmann, F. (Palmer)	4571	Nov. 25	Treating or preparing meal.
Weightman, A.	2307	June 1	Securing bottle-stoppers.
Weiler, C. (Johnson)	1453	Apr. 5	Caps for spinning spindles.
Weintraud, F., & Joyce, R. J. S.	3436	Aug. 31	Solitaires and studs.
Weir, G. & J.	5012	Dec. 28	Steam-engines.
" J. & G.	5012	Dec. 28	Steam-engines.
" J. B.	3960	Oct. 13	Cutting, hewing, and dressing stone.
" J. G.	617	Feb. 15	Railway signals.
Weisbach, C. H. (Wise)	4741	Dec. 7	Drying yarn.
Wekey, S.	1215	Mar. 22	Washing clothes.
" S.	1855	May 3	Roller skates.

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Welch, F. B., & Scott, H. B. - - -	2362	June 6	Agitating and incorporating substances, &c.
" J. - - - - -	2202	May 25	Doubling and twisting cable laid cords, &c.
Weldon, F. - - - - -	4186	Oct. 28	Measuring or ascertaining distances.
" F. - - - - -	4669	Dec. 16	Measuring or ascertaining distances.
" W. - - - - -	3379	Aug. 28	Lining furnaces in making sulphide of sodium [and sulphide of potassium]
" W. - - - - -	3380	Aug. 28	Sulphide of sodium and sulphide of potassium [and "black-ash"]
" W. - - - - -	3381	Aug. 28	Reducing sulphate of soda and sulphate of potassium to sulphide; "black-ash"
" W. - - - - -	3382	Aug. 28	Impermeable carbon bricks, &c.
" W. - - - - -	3383	Aug. 28	Furnaces for making sulphide of sodium [sulphide of potassium and "black-ash"]
" W. - - - - -	3384	Aug. 28	Sulphide of sodium and sulphide of potassium
" W. - - - - -	3385	Aug. 28	Silicates or aluminates of soda and potash [sulphur and sulphurous acid]
" W. - - - - -	3386	Aug. 28	Aluminate and phosphate of soda or potash [sulphur and sulphurous acid]
" W. - - - - -	3387	Aug. 28	Caustic soda and caustic potash: sulphur and [sulphurous acid]
" W. - - - - -	3388	Aug. 28	Converting sulphide of sodium into carbonate [of soda]
" W. - - - - -	3389	Aug. 28	Treating sulphide of sodium and sulphide of potassium; absorbing sulphuretted hydrogen.
" W. - - - - -	3390	Aug. 28	Soda and potash; recovering sulphur.
Wellington, D., & Curtis, J. - - -	1432	Apr. 4	Tongues of ore-stampers.
Wells, A. C. - - - - -	1623	Apr. 18	Roller skates.
" G., & Page, J. - - - - -	4809	Dec. 13	Roller or rink skate.
" G. I. J. - - - - -	2620	June 24	Soda and potash.
" J. - - - - -	3411	Aug. 30	Dies for screwing tubes, &c.
" N. - - - - -	1149	Mar. 17	Mariner's compasses.
Wenn, J. B., & Dashwood, A. - - -	2580	June 22	Heating greenhouses, baths, &c.
Wentworth, H. T., & Fletcher, C. (Smith). - - -	2077	May 17	Doubling and twisting.
Werdermann, R. - - - - -	235	Jan. 20	Locomotive-engine wheels.
" R. - - - - -	374	Jan. 29	Railway brakes.
" R. - - - - -	1445	Apr. 5	Extracting gold, &c. from ores.
" R. - - - - -	4805	Dec. 12	Electric lighting apparatus.
Werneur, H. (Hamilton) - - - - -	252	Jan. 21	Bath-towel and dressing-gown.
Wernigh, W., & Meyer, F. J. - - -	807	Feb. 26	Wire cable towing steamer.
" W., & Meyer, F. J. - - - - -	4457	Nov. 18	Wire cable canal towing steamers.
Wertheim, J. (Johnson) - - - - -	3444	Sep. 1	Motive-power.
" L. (Johnson) - - - - -	491	Feb. 7	A lubricating packing.
Wesenfell, U. L., & Mitter, M. G. (Abel) - - -	4215	Oct. 31	Metal plates for bearing loads.
Wesley, W. - - - - -	3554	Sep. 11	Heels for boots and shoes.
West, E. W. - - - - -	5020	Dec. 28	Ships' state-room and other like lamps.
Westinghouse, G. - - - - -	4243	Nov. 2	Speed governors, indicators, and recorders.
" G., & Phillippi, A. H. - - - - -	4296	Nov. 7	Lighting railway carriages.
Westley, J. & Morris, J. - - - - -	1059	Mar. 11	Steam-boiler injectors.
" T. & W. - - - - -	552	Feb. 11	Loom spindle studs.
" W. & T. - - - - -	552	Feb. 11	Loom spindle studs.
" W., Barnes, J., & Crossland, [W. - - - - -	4710	Dec. 5	Sizing and drying yarns and fabrics.
Westmacott, C. M. - - - - -	3320	Aug. 24	Utilizing weight of the human body as a motive power
" P. G. B. - - - - -	4701	Dec. 5	Squeezing, &c. blooms or masses of metal
Westman, H. - - - - -	846	Feb. 29	Wooden structures, &c.
Weston, B. S. - - - - -	318	Jan. 26	Roller skates, &c.
" B. S. - - - - -	1098	Mar. 14	Roller skates.
Weston, D. Mc C. (Watson) - - - - -	3696	Sep. 21	Sugar-making.
" E. (Haddan) - - - - -	4280	Nov. 6	Magneto-electric machines.
Weston, G. - - - - -	2418	June 12	Hauling gear, &c. for railway carriages.
" P. A., & Parker, T. - - - - -	2556	June 20	Steam-pumps and steam-engines.

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Weston, S. H. (Clark) - - - - -	1954	May 10	Wheel-harrows and seed-sowers.
Westwood, A. - - - - -	3272	Aug. 21	Smoke-consuming furnace.
Wetzel, C. H. - - - - -	3638	Sep. 16	Locks for match and other boxes.
Weyde, H. V. - - - - -	1747	Apr. 25	Photography.
Weyhe, W. - - - - -	392	Feb. 1	Raising or forcing fluids.
Wheatley, S. V. - - - - -	115	Jan. 11	Roller skates.
" W., & Heaps, E. K. - - -	3378	Aug. 28	Steaming or cooking vegetables, &c.
Wheeldon, F. R. - - - - -	3596	Sep. 14	Finishing ends of metal-rolling rolls.
Wheeler, C. - - - - -	750	Feb. 23	Stand for fly-papers, &c.
" H., & Pearson, J. - - -	934	Mar. 4	Steam-pumps.
Wheeler, M. (Haddan) - - - -	483	Feb. 7	Solar chronometers.
" N. (Lake) - - - - -	4292	Nov. 6	Preparing wood for varnishing, &c.
" S. (Tindell) - - - - -	1324	Mar. 28	Making boxes, &c. of paper-pulp.
" S. (Tindell) - - - - -	3774	Sep. 28	Making boxes, &c. from pulp.
" S., & Jerome, E. (Tindell) -	3129	Aug. 5	Making boxes and hollow articles.
Wheelhouse, T. - - - - -	4374	Nov. 11	Driving straps or belts.
Whelpley, J. A., Berteaux, G. E., & [Sheraton, A. B. (Thompson).	1262	Mar. 24	Skates.
Whewell, A. H., & Woods, S. E. -	4857	Dec. 15	Agricultural apparatus for cultivating, &c.
Whieldon, W., Durand, F., & Marais, [E. L.	654	Feb. 17	Pressing or moulding bricks.
Whight, G. (McKiernan) - - - -	595	Feb. 14	Steam-whistles.
Whitaker, J., & Turner, W. T. - -	5040	Dec. 29	Motive-power.
" O. L. & W. A., Pearson, J., [& Entwistle, L.	3838	Oct. 4	Spinning fibres.
" R. - - - - -	2667	June 28	Excavating and loading earth, &c.
" T. & W. - - - - -	3166	Aug. 10	Regulating temperature of heating and ventilating apparatus.
" W. & T. - - - - -	3166	Aug. 10	Regulating temperature of heating and ventilating apparatus.
" W. A. & O. L., Pearson, J., [& Entwistle, L.	3838	Oct. 4	Spinning fibres.
Whitcombe, A. - - - - -	3329	Aug. 24	Screws, bolts, hooks, and pulleys.
" A. - - - - -	3330	Aug. 24	Carriages and harness for same.
" A. - - - - -	3431	Aug. 31	Affixing adhesive stamps.
White, J. - - - - -	42	Jan. 4	Lamps.
" J., M. & T. - - - - -	1240	Mar. 23	Winding-machines.
" J. B. & R. O. - - - - -	4343	Nov. 9	Making Portland cement.
" M., T. & J. - - - - -	1240	Mar. 23	Winding-machines.
" O. W., Elliot, R., & Pye-Smith, [A.	1273	Mar. 24	Stable-fittings and paving.
" R. O. & J. B. - - - - -	4343	Nov. 9	Making Portland cement.
" T., J. & M. - - - - -	1240	Mar. 23	Winding-machines.
" W. - - - - -	3310	Aug. 23	Treating coffee and cocoa beans.
" W. - - - - -	3576	Sep. 12	Purifying and disinfecting sewage, &c.
" W. G., & Stevenson, F. H. -	622	Feb. 15	Roller skates.
Whiteford, J. - - - - -	2783	July 8	Shoes for, and shoeing horses.
Whitehall, E. - - - - -	3060	July 31	Ruching, pleating, gophing, &c. trimmings.
Whitehead, F. - - - - -	4187	Oct. 28	Sewing and other machines.
" H. M. - - - - -	3345	Aug. 25	Preserving meat in solid form.
" H. M. - - - - -	4586	Nov. 27	Preserving meat.
" H. W. - - - - -	365	Jan. 29	Combing, &c. fibres.
" H. W., & Best, I. - - -	1643	Apr. 19	Fly combs of carding-engines.
" L. R. & T. - - - - -	3611	Sep. 15	Ornamenting glass.
" T. & L. R. - - - - -	3611	Sep. 15	Ornamenting glass.
" T. & W. H. - - - - -	4097	Oct. 23	Drawing and holding rollers for fibres.
" T., & Battinson, I. & G. -	1444	Apr. 4	Combing wool.
" W., Bolt, J., & Weeder, W. -	2203	May 25	Spoons.
" W. H. & T. - - - - -	4097	Oct. 23	Drawing and holding rollers for fibres.
Whitehill, R. (Newton) - - - -	3702	Sep. 21	Sewing-machines and attachments.
Whitehouse, E. O. W. - - - -	643	Feb. 16	Roller skates.
" E. O. W., & Thomson, E. H. -	2248	May 29	Passenger-registers for omnibuses, &c.
Whiteley, J., & Kendall, W. J. -	4498	Nov. 21	Roller skates

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Whiteley, W. - - - - -	2628	June 26	Roving and spinning fibres.
" W. - - - - -	4469	Nov. 18	Spinning fibres.
" W., & Sykes, A. - - -	3486	Sep. 5	Spinning and twisting fibres.
Whiteside, J., & Goodair, R. - -	718	Feb. 21	Looms.
Whitestone, J. - - - - -	3001	July 25	Lighting and heating.
Whitfield, N. - - - - -	4355	Nov. 10	Fire-grate, stove, or furnace.
Whitlow, J. - - - - -	1941	May 9	Roller skates.
Whiting, E. B. (Haddan) - - -	1400	Mar. 31	Dressing tampico and bristles.
" E. B. (Haddan) - - -	3177	Aug. 11	Dressing tampico and bristles.
Whitney, E. R., & Conant, T. (Haddan)	1401	Mar. 31	Grain-binders.
Whittaker, P. H. - - - - -	3587	Sep. 13	Signalling apparatus.
Whithhall, D. S. (Pitt) - - -	4546	Nov. 23	Railroad cross-ties.
Whiththead, W. - - - - -	2390	June 8	Pigment.
Whittle, W., & Newman, J. - -	891	Mar. 2	Coating light metallic articles.
Whitton, W. B. - - - - -	4690	Dec. 4	Drain-pipes and adapting same for gas and water.
Whitwell, T. - - - - -	830	Feb. 28	Kilns for burning and drying bricks, &c.
" T. - - - - -	2066	May 16	Heating air and gases.
Whitworth, Sir J. - - - - -	2894	July 14	Wheels for carriages.
" Sir J. - - - - -	4937	Dec. 21	Steel crank-axes.
" T. S., & Higgins, J. - -	3228	Aug. 16	Spinning and doubling fibres.
Whyte, G. - - - - -	159	Jan. 14	Railway carriage couplings.
" J., & Leeming, J. - - -	43	Jan. 4	Looms.
" J., & Thallon, M. - - -	4681	Dec. 4	Manufacture or treatment of thread.
Wiard, N. (Lake) - - - - -	1929	May 8	Projectiles for ordnance.
Wickens, H., & Armit, R. H. - -	4638	Nov. 30	Constructing ships to protect from injury by ram, &c.
Wicker, F. [<i>Barmen Artificial Ice Factory</i>] (Wirth).	2601	June 23	Artificial ice.
Wickes, J. H. (Lake) - - - - -	1546	Apr. 11	Refrigerating apparatus for provision carriages.
Wickstead, C. - - - - -	3813	Oct. 2	Coiling gear of steam-ploughing engines, &c.
Wier, M. A. - - - - -	1679	Apr. 21	Driving sewing and other machines.
" M. A. - - - - -	4306	Nov. 7	Balancing, &c. suspended articles.
Wiggin, A. (Lake) - - - - -	2103	May 18	Boiler-flue cleaners.
Wiggins, W. - - - - -	4261	Nov. 4	Watches to prevent robbery thereof.
Wigham, J. R. - - - - -	1459	Apr. 5	Audible fog and other signals.
" J. R. - - - - -	1743	Apr. 25	Fog and other signals.
" J. R. - - - - -	4557	Nov. 24	Giving audible fog-signals.
Wigzell, E., & Pollit, J. - - -	3603	Sep. 14	Drying skeins or hanks of wool, &c.
" E. E., & Halsey, C. - - -	177	Jan. 17	Engines for steam-launches, &c.
" E. E., & Halsey, C. - - -	3678	Sep. 20	Engines for steam-launches and yachts.
Wilcox, E. N., & Waters, H. N. (Clark)	1464	Apr. 5	Feed-water heaters.
" J. (Hughes) - - - - -	4977	Dec. 23	Steam-heaters.
Wilcox, W. C., & Baker, B. F. - -	244	Jan. 21	Steam-engine.
Wild, A. S., & Chadwick, G. - -	4039	Oct. 19	Loom-pickers and forming same.
" A. S., & Butterworth, J. - -	5030	Dec. 29	Looms.
" L. - - - - -	224	Jan. 20	Extinguishing fires in buildings.
" R. A. - - - - -	4393	Nov. 13	Shuttles and making same.
Wilde, E. A. - - - - -	4539	Nov. 22	Aluminium and aluminium alloys.
" H. - - - - -	3569	Sep. 12	Rollers for printing calico, & other purposes.
Wildes, G. H., & Roettger, W. C. A.	2745	July 5	Coal-shoots and weighing-machines.
Wilding, J. - - - - -	3288	Aug. 22	Washing-machines.
Wildy, A. H. - - - - -	4024	Oct. 18	Elevated railways and rolling stock for same.
" W. L. - - - - -	1547	Apr. 11	Cocks and valves.
" W. L. - - - - -	3905	Oct. 10	Cocks or valves for gas-fittings.
Wiles, T. S., & Adams, A. P. (Newton)	1971	May 10	Ironing-machines.
" T. S., & Adams, A. P. (Newton)	1987	May 11	Starching textile substances.
Wilhelmi, F. (Wise) - - - - -	2980	July 22	Cleaning lithographic stones.
Wilkins, F. - - - - -	2286	May 31	Propelling vessels.
" S. B. - - - - -	3656	Sep. 19	Ball-cock hydrants.
" T. - - - - -	402	Feb. 1	Looped or knitted fabrics.
Wilkinson, E., & Lowndes, R. - -	823	Feb. 28	Belting or driving bands, &c.
" F. - - - - -	4063	Oct. 20	Carding fibres.

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Wilkinson, J., Hardman, J., & Birt- [wisle, R.	5065	Dec. 30	Burnishing photographs.
„ J. W., Bryden, W., & [Dodgshun, E., A. & I.	4419	Nov. 15	Mixing or blending, &c. wools and fibres.
Wilks, G., Pullar, J., & Goslin, S. B.	393	Feb. 1	Divers' dresses.
Willans, J. G. - - - - -	3464	Sep. 2	Making iron and steel.
„ J. G. - - - - -	4192	Oct. 30	Making castings.
Willett, G. R. - - - - -	3223	Aug. 16	Washing-machines.
„ G. R. - - - - -	4680	Dec. 4	Wringing and mangling machines.
„ W., & Mason, M. F. - - -	1690	Apr. 21	Tea-kettles, coffee-pots, &c.
Williams, D., Jenkins, J., Jones, J., [& Thomas, T.	1120	Mar. 15	Utilising old annealing pots of tin-plate works.
„ John - - - - -	614	Feb. 15	Bottles and stoppers for same.
„ John - - - - -	1004	Mar. 8	Bottle-stoppers.
„ John - - - - -	4025	Oct. 18	Cylinders and valves for same.
Williams, John R. (Mills) - - -	3889	Oct. 7	Horse-shoes, horse-shoe blanks, & making same.
Williams, Joseph, & Perkins, R. W. [& F. H.	4264	Nov. 4	Furnaces for burning anthracite, &c.
Williams, Joseph S. (Lake) - - -	966	Mar. 6	Railway switches.
„ P. B., & Hill, T. (Clark) -	2059	May 16	Steam-hammers.
Williams, R. H. - - - - -	1246	Mar. 23	Preventing spontaneous combustion, &c. on [board ship.
„ R. P., & Wilson, G. - - -	2065	May 16	Railway rails.
„ T., & Pemberton, J. - - -	2771	July 7	Steam-boilers.
„ T. H. - - - - -	1769	Apr. 27	Holding and releasing ropes, &c.
„ W., Hill, J. C., & Pilliner, [A. C.	4986	Dec. 23	Rolling rail-ends and old rails into billets, &c.
„ W. H. - - - - -	263	Jan. 22	Ornamenting wood.
„ W. J. - - - - -	247	Jan. 21	Making and treating phosphates.
Williamson, W. S. - - - - -	2039	May 15	Treating slag.
„ W. S. - - - - -	3816	Oct. 2	Treating refuse from iron furnaces.
„ W. S. - - - - -	4409	Nov. 14	Blast-furnaces.
Willis, H. E. - - - - -	4808	Dec. 19	Lamps.
Willm, E., Bouchardat, G., & Girard, C.	4839	Dec. 14	Obtaining coloring matters.
Wills, J. B. (Haddan) - - - - -	1489	Apr. 7	Making horse-shoe nails; working, &c. iron.
Wilson, Alexander - - - - -	2338	June 3	Utilising waste heat from furnaces.
„ Alexander - - - - -	4746	Dec. 7	Armour-plates.
„ Alexander F., Kingdom, H. W. [A., & Howard, J.	4014	Oct. 18	Controlling flow of and preventing waste of [water, &c.
„ Alfred, & Brook, E. - - -	1948	May 9	Gas-making.
„ Alfred, & Brook, E. - - -	3949	Oct. 12	Gas-making.
„ C., Dore, W., & Tapley, J. P.	3167	Aug. 10	Sewing-machines.
„ E. - - - - -	1232	Mar. 22	Pump and other valves.
Wilson, E. (Woodbury) - - - - -	3867	Oct. 6	Magic lanterns and apparatus.
Wilson, F., Mesnard, G. H., & Sankey, [W.	2196	May 24	Roller skates.
„ G., & Williams, R. P. - - -	2065	May 16	Railway rails.
„ G., & Mark, J. - - - - -	2504	June 16	Morticing-machines.
„ G. A. & W. A., & Duncan, G.	2908	July 15	Folding paper.
„ H. - - - - -	141	Jan. 13	Ventilating gulley and trap.
„ James - - - - -	805	Feb. 26	Steam-boilers.
Wilson, James G. (Sherry) - - -	856	Feb. 29	Revolving or rolling shutters.
Wilson, John - - - - -	3162	Aug. 10	Cooking-ranges.
„ John, & Kelman, J. A. - - -	3495	Sep. 5	Cleaning tramway rails.
„ John C. - - - - -	4139	Oct. 25	Safety-valve apparatus.
„ John G. (Sürth & Steinhaus)	1175	Mar. 18	Railway carriage couplings.
„ John G. (Scholz) - - - - -	2751	July 5	Recording performances of engines, &c.
„ John G. (Schäffer & Budenberg)	3737	Sep. 25	Extinguishing sparks in locomotives, &c.
„ John H. - - - - -	3696	Sep. 21	Supplying air to furnaces.
„ John J. - - - - -	140	Jan. 13	Supplying & discharging water & other liquids.
„ Joseph W. - - - - -	328	Jan. 27	Lifting and weighing vessels.
„ M. - - - - -	2918	July 17	Velocipedes.
„ N., & Turner, A. W. - - -	222	Jan. 20	Hair-dressing and horse-grooming apparatus.

Name.	Number of Application.	Date of Application.	Subject.
Wilson, P. G. - - - - -	3244	Aug. 18	Brooches.
" R. - - - - -	2584	June 23	Screw-propellers and actuating same.
" R. - - - - -	2663	June 28	Hydraulic-presses.
" R. - - - - -	4756	Dec. 8	Finishing cotton fabrics.
" R., & Leach, W. - - - -	2583	June 23	Ejectors for raising, &c. liquids.
" R., & Nicholson, D. - - -	3303	Aug. 23	Hydraulic-presses.
" R. A. - - - - -	4020	Oct. 18	Furnaces for steam-boilers, &c.
" R. P. - - - - -	91	Jan. 8	Testing petroleum and other liquids.
" T. - - - - -	3077	Aug. 1	Metallic bedsteads.
" T. E. - - - - -	586	Feb. 12	Heating and drying.
" T. E., & Hacking, W. H. -	3499	Sep. 6	Winding yarn.
" W., & Battersby, J. - - -	350	Jan. 28	Horse-rakes.
" W., & Battersby, J. - - -	2723	July 1	Mowing and reaping machines.
" W. A. & G. A., & Duncan, G.	2908	July 15	Folding paper.
" W. V., & Cant, H. - - -	4912	Dec. 20	Aniline dyes.
" W. W. - - - - -	3472	Sep. 2	Gauging and mixing concrete, &c.
Wiltshire, W. - - - - -	2494	June 16	Fastening railway carriage doors.
Wimpenny, T. - - - - -	1575	Apr. 13	Domestic fan or bellows.
Winchester, W. H. B., & Everest, H.	1583	Apr. 13	Ordnance and firing same; projectiles.
" W. H. B., & Everest, H.	4061	Oct. 20	Roller-blinds.
Windhausen, F. - - - - -	4762	Dec. 8	Producing cold and warm air.
Winner, J. E. (Lake) - - - -	1559	Apr. 12	Preventing fraud by stamps, &c.
Winnert, J. T. (Clark) - - - -	1051	Mar. 10	Chronometer balances.
Winord, C. (Lake) - - - - -	1521	Apr. 10	Tube-expander.
Winter, R. & T. - - - - -	265	Jan. 22	Signalling at night.
" T. & R. - - - - -	265	Jan. 22	Signalling at night.
" W. - - - - -	3215	Aug. 15	Preserving pencils & other writing implemen
Winton, P. - - - - -	1959	May 10	Potato-digger.
Wire Co., American Cable Screw (Lake)	920	Mar. 3	Uniting boot-uppers, hose-tube seams, &c.
Wirth, F. (Reimherr) - - - - -	356	Jan. 28	Locomotives.
" F. (Carrey) - - - - -	454	Feb. 4	Woven fabrics.
" F. (Sigl) - - - - -	456	Feb. 4	Raising liquids; blowing air; propelling ship
" F. (Hannover Gummi Kamm [Co.])	973	Mar. 6	[kneading dough, &c.] Bobbins.
" F. (Blüthner) - - - - -	1124	Mar. 15	Pianos.
" F. (Humboldt Machines Co.) -	1520	Apr. 10	Gas-engines.
" F. (Stark) - - - - -	1928	May 8	Cooking-apparatus.
" F. (Teiter) - - - - -	2087	May 16	Hoists and steam-hammers.
" F. (Wohl & Stotz) - - - - -	2194	May 24	Roller skates.
" F. (Ritz Bros.) - - - - -	2405	June 9	Malt-turning apparatus.
" F. (Neuerburg) - - - - -	2406	June 9	Screen for sorting minerals, &c.
" F. (Wicker, F., Barmen Artificial Ice Factory).	2601	June 23	Artificial ice.
" F. (Shiffers) - - - - -	2822	July 11	Grease-boxes.
" F. (Bortfeldt) - - - - -	2873	July 13	Silk hats.
" F. (de Buigne) - - - - -	2979	July 22	Rollers of figured iron, &c.
" F. (Gleisle) - - - - -	3046	July 28	Table-fountains; raising water.
" F. (Huppe & Bender) - - - -	3273	Aug. 21	Fastening frames on bags.
" F. (Maey) - - - - -	3362	Aug. 26	Railway brakes.
" F. (Remus) - - - - -	3626	Sep. 16	Packing-rings and making same.
" F. (Ellenberger) - - - - -	3724	Sep. 23	Mashing, &c. material for distilleries.
" F. (Gerlach) - - - - -	3756	Sep. 26	Treating spent materials of gas works.
" F. (Wuppermann) - - - - -	3891	Oct. 7	Braiding-machines.
" F. (Kallab) - - - - -	3896	Oct. 9	Bleaching animal fibre.
" F. (Hochgrassl) - - - - -	4237	Nov. 2	Controlling width of railway rails.
" F. (Nollen) - - - - -	4371	Nov. 11	Controlling hade or dip of borings in tunnelling.
" F. (Matern & Matern) - - - -	4514	Nov. 21	Drying bricks, cement, pottery, &c.
Wise, W. L. (Rössler) - - - - -	192	Jan. 18	Making bleached ozokerite.
" W. L. (Hagenbüchli) - - - -	641	Feb. 16	Concertinas and accordeons.
" W. L. (Burden) - - - - -	1033	Mar. 9	Making horse-shoes, &c.
" W. L. (Manier) - - - - -	1142	Mar. 16	Lifting-jack.

Name.	Number of Application.	Date of Application.	Subject.
Wise, W. L. (<i>Gaucher</i>) -	1699	Apr. 21	Hydro-gas injector.
" W. L. (<i>Farcoi et ses fils</i>) -	1949	May 9	Steam-engines.
" W. L. (<i>Susemihl</i>) -	2244	May 27	Exhausting and condensing steam.
" W. L. (<i>Klinkerfues</i>) -	2658	June 28	Telescopes for measuring distances.
" W. L. (<i>Rebour & Dévot</i>) -	2744	July 4	Roller skate.
" W. L. (<i>Rebour & Dévot</i>) -	2905	July 15	Utilising centrifugal force.
" W. L. (<i>Wilhelmi</i>) -	2980	July 22	Cleaning lithographic stones.
" W. L. (<i>Holley</i>) -	3295	Aug. 22	Furnaces.
" W. L. (<i>Chebischef</i>) -	3799	Sep. 29	Motive-power engine governors.
" W. L. (<i>Fettis</i>) -	4110	Oct. 24	Wire-taste or ribbon wire.
" W. L. (<i>Lauth</i>) -	4158	Oct. 26	Rolling hoops, straps, and plates.
" W. L. (<i>Herrshoff & Herrshoff</i>) -	4271	Nov. 4	Steam-boilers, &c. for steam yachts.
" W. L. (<i>Huebecher</i>) -	4443	Nov. 16	Shaping metal for tongues of musical instruments.
" W. L. (<i>Weisbach</i>) -	4741	Dec. 7	Drying yarn.
Wohl, J., & Stotz, A. (<i>Wirth</i>) -	2194	May 24	Roller skates.
Wolff, J., & Betley, R. -	44	Jan. 4	Colouring matters for dyeing, &c.
" J., & Betley, R. -	313	Jan. 26	Aniline dyes.
" L. -	4453	Nov. 17	Pencil point protector and holder.
Wollenberg, O. -	2258	May 29	Lamps.
Wollman, J. -	5053	Dec. 30	Reversible ink-well.
Wolchoff, A. D. -	3224	Aug. 16	Marking divisions upon objects; dividing [scientific instruments.
Wolstencroft, T., & Firth, E. -	3239	Aug. 17	Springs for wringing-machines, &c.
" T., & Firth, E. -	4754	Dec. 8	Springs and rollers for wringing and other [machines.
Wolstenholme, J. -	3958	Oct. 13	Steam-pumps or pumping-engines.
" J., Spencer, S., & [Mason, S.	4485	Nov. 20	Forming vacuum in paper-making machines.
Wood, C. -	795	Feb. 25	Making bricks, &c. from slag.
" C. -	4372	Nov. 11	Treating slag, &c. for making "slag wool."
" C. F. -	933	Mar. 4	Roller skates.
" C. F. -	1735	Apr. 25	Roller skates.
" C. F. -	2448	June 14	Portable skating rink.
" C. F. -	3617	Sep. 15	Roller skates.
" C. F. -	4133	Oct. 25	Roller skates.
" Edward -	749	Feb. 23	Steam-engines, boilers, and pipes.
" Ellis, & Jowett, J. -	3242	Aug. 17	Boiler-furnace and other doors.
" James -	1514	Apr. 10	Hats.
" James, & Pooley, H. -	100	Jan. 8	Weighing-machines.
" Joel -	1249	Mar. 23	Railway couplings.
" John -	2291	May 31	Shaping, &c. earthenware and other articles.
" John -	4416	Nov. 15	Taking casts of the mouth for dental purposes.
" Joseph W., & Shakespear, [W. H.	1263	Mar. 24	Roller and ice skates.
" Joseph W., & Shakespear, [W. H.	1478	Apr. 7	Railway signals.
" Joseph W., Shakespear, W. H., [W. H.	3171	Aug. 11	Railway signals.
" T. -	329	Jan. 27	Dressing and washing fruit.
" T. H., & Cross, T. -	1069	Mar. 11	Rink skates.
Wood, Walter A., & Cranston, W. [McI.	783	Feb. 24	Mowing and reaping machines.
Wood, William A. -	4608	Nov. 28	Harvester rakes.
Wood, William B., Smith, P. E., & [Spruill, S. R. (Clark).	4312	Nov. 7	Electric-light buoy.
Woodall, S. -	954	Mar. 6	Coal tubs or waggon.
" S. -	3796	Sep. 29	Lubricating bearings of wheels and axles.
Woodbury, W. B. (<i>Wilson</i>) -	3867	Oct. 6	Magic lanterns and apparatus.
Woodcock, H., & Brown, J. -	4134	Oct. 25	Mules.
Woodhead, J. -	384	Jan. 31	Carriage spring heads.
Woodhouse, J. -	2807	July 10	Building-blocks.
Wooding, C. H., & Palmer, W. -	719	Feb. 21	Roller skates.

Name.	Number of Application.	Date of Application.	Subject.
Woods, S. E., & Whewell, A. H. -	4857	Dec. 15	Agricultural apparatus for cultivating, &c.
Woods, T. (Haddan) - - - - -	3907	Oct. 10	Stone-dressing machines.
Woodward, H. (<i>Lippincott</i>) - - -	2186	May 24	Billiard balls.
" J., & Southgate, T. - - -	117	Jan. 11	Fire-arms.
" J., & Southgate, T. - - -	600	Feb. 14	Fire-arms.
" J., & Dryhurst, J. - - -	3189	Aug. 12	Door, window, and show plates and labels.
" T. - - - - -	651	Feb. 17	Fire-arms.
Woolfe, H. - - - - -	1134	Mar. 16	Washing-machines.
Woollatt, D. - - - - -	1584	Apr. 13	Treating hay.
Woolnough, G., & Dehne, F. (Brewer)	2456	June 14	Moulding.
Woolrich, A. - - - - -	82	Jan. 7	Trousers.
Wooton, W. S. (Smith & Smith) - -	2231	May 27	Writing desks or tables.
Wooten, J. E. (Johnson) - - -	2442	June 13	Combustion of fuel in furnaces.
Wormald, J. (<i>Kerr</i>) - - - - -	4484	Nov. 20	Storing & supplying fuel to railway tenders, &c.
Worms, J. (Vauthier) - - - - -	2135	May 20	Printing in colors newspapers, magazines, &c.
Worssam, S. W. - - - - -	1345	Mar. 29	Sawing-machines.
Worth, S. L., & Pontifex, J. H. - -	4240	Nov. 2	Ventilating waterproof garments.
Worthington, W. - - - - -	551	Feb. 11	Working fog signals.
" W. - - - - -	840	Feb. 29	Working fog-signals.
Wotherspoon, J. - - - - -	952	Mar. 6	Asbestos paper and millboard.
" J. - - - - -	3213	Aug. 15	Asbestos paper and millboard.
Wragg, W. H. - - - - -	1659	Apr. 20	Cutlery.
Wray, C. & L. - - - - -	976	Mar. 6	Electrical apparatus.
" L. & C. - - - - -	976	Mar. 6	Electrical apparatus.
" T., Hagues, E., & Wright, J. -	2078	May 17	Floors, ceilings, pillars, &c.
Wright, C. - - - - -	650	Feb. 16	Ore amalgamating, &c. machine.
" D. P. - - - - -	358	Jan. 29	Cooking and heating apparatus; lamps.
" D. P. - - - - -	2041	May 15	Cooking and heating apparatus.
" E., & Hooker, P. - - - - -	1297	Mar. 25	Attachment for pole-chains, &c.
" F. H. - - - - -	84	Jan. 7	Combing fibres.
" J. - - - - -	410	Feb. 2	Roller skates.
" J., Wray, T., & Hagues, E. -	2078	May 17	Floors, ceilings, pillars, &c.
Wright, J. H., & Drake, E. (Lake) -	3842	Oct. 4	Uniting leather, &c. sewing boots, harness, &c.
Wright, J. R. - - - - -	1934	May 9	Hand-truck.
" J. R., Smith, W., & Butler, I. -	1635	Apr. 19	Casting steel and iron.
" J. Thom - - - - -	4703	Dec. 5	Musical instruments.
Wright, J. Tolbert, & Schneble, M. (Lake)	2021	May 13	Packing for piston-rods.
Wright, L. T. - - - - -	1003	Mar. 8	Revivifying gas-lime and obtaining products.
" R., & Banks, L. - - - - -	2880	July 14	Armour-plating.
" R. L., & Kelly, H. W. - - -	5010	Dec. 28	Spinning tobacco.
" W. - - - - -	1847	May 2	Union-joints for pipes and cocks.
" W. - - - - -	4972	Dec. 23	Furnace bars.
Wrigley, A. - - - - -	3439	Aug. 31	Railway signals.
" J. - - - - -	3881	Oct. 7	Compositions for applying to straps, &c.
" T. - - - - -	283	Jan. 25	Spinning, &c. fibrous substances.
Wulferode, W. - - - - -	701	Feb. 19	Lamps.
Wülfing, R. (<i>Anschel & Herberts</i>) -	1958	May 10	Buttons.
Wuppermann, G. (Wirth) - - - -	3891	Oct. 7	Braiding-machines.
Wyatt, G., & Purvis, T. - - - -	1475	Apr. 6	Internal tube cutter.
" W. P. - - - - -	1896	May 5	Securing handles of locks, &c.
Wynn, W. N., & Dales, J. H. - -	2121	May 19	Window-sash fasteners.

Y.

Yarndley, H. - - - - -	2008	May 13	Fastening for solitaires, books, &c.
Yates, H., & Beck, J. - - - - -	3769	Sep. 28	Reefing or furling sails.
" H. & T. E., & Bedford, H. -	2459	June 14	Card-setting machines.
" J. - - - - -	1028	Mar. 9	Ship, fort, and armour-plates and blocks.
" J. - - - - -	4662	Dec. 2	Embroidering hosiery or other tubular fabrics.
" T. E. & H., & Bedford, H. -	2459	June 14	Card-setting machines.

Name.	Number of Application.	Date of Application.	Subject.
Yeo, E.	1486	Apr. 7	Yarns for packing.
„ E.	2229	May 27	Yarn packing for pistons, pipe-joints, &c.
Youard, H. G.	2485	June 15	Cutting and pasting wall-papers, &c.
Young, A. & W., & Neilson, A.	3894	Oct. 9	Distilling bituminous substances.
„ D.	463	Feb. 4	Exhibiting, &c. pictures; making oxygen gas.
„ F.	2204	May 25	Roller or wheel skates.
„ F., & Deacon, C. F.	3558	Sep. 11	Roller or wheel skates.
Young, H., King, T., & Bryant, C. B. [(Lake).	4239	Nov. 2	Smoke-consuming furnaces.
Young, H. B.	3025	July 27	Marine steam-engines.
„ J.	2537	June 19	Feeding furnaces with fuel.
„ B. McL.	1369	Mar. 30	Sewing-machines.
„ R. McL.	2317	June 1	Sewing-machines.
„ S.	3879	Oct. 7	Motive-power.
„ T. P., & Fletcher, J.	1897	May 5	Warping and beaming.
„ W.	3173	Aug. 11	Carburetting air and gases.
„ W.	3334	Aug. 24	Supplying furnaces, &c. with fuel.
„ W.	4613	Nov. 29	Gas-making.
„ W. & A., & Neilson, A.	3894	Oct. 9	Distilling bituminous substances.
Yule, J. R.	4928	Dec. 21	Two-wheeled vehicles.
Z.			
Zachariae, E. (Johnson)	3925	Oct. 11	Pianofortes, &c.
Zaffira, G.	520	Feb. 9	Watches, clocks, and chronometers.
„ G.	2975	July 22	“Up-and-down” movement for watches, &c.
Zambra, J. W., & Negretti, H.	1868	May 3	Hydrometers.
Zanichelli, C. (Gedge)	4177	Oct. 28	Portable articulated railway.
Zanini, P. G. B., & Pasquale, F. (Mills)	1000	Mar. 8	Steam-engines.
Zanni, G.	2821	July 11	Magneto-electric & electro-magnetic machines.
„ G.	4222	Nov. 1	Applying electricity or magnetism to baths.
Zarin, A. P. (Lake)	298	Jan. 25	Making bread.
„ A. P. (Lake)	301	Jan. 25	Preparing distillery mash.
Zeden, A. H. A., & Bowra, M. E.	3747	Sep. 26	Elastic materials for boots, bands, gloves, [sheets, &c.
Zeidler, C., & Illingworth, W.	4303	Nov. 7	Making skeps and other baskets.
Zentmayer, J. (Stuart)	3078	Aug. 1	Microscopes.
Zerbe, B. H., & Scott, H. P.	3773	Sep. 28	Lubricants and packings; coverings for steam- [boilers, pipes, &c.
Zinc, La Société des Mines et Fonderies [de (Clark).	444	Feb. 3	Pulverising ores, &c.
Zingler, M.	215	Jan. 12	Varnish; sizings and water-proofings.
„ M.	2621	June 24	Gold, silver, and bronze paints or inks.
„ M., & Kingzett, C. T.	274	Jan. 24	Antiseptics and disinfectants.
„ M., & Kingzett, C. T.	2630	June 26	Blood-albumen and applying same.
Zipseer, A. (Pieper)	4090	Oct. 23	Grain-cutting machinery.
Zoller, J. G., & Scott, D.	2496	June 16	Coverings for floors, roofs, and other surfaces; [wagon covers; hose or tubing, bags, slabs, [tables, cisterns, ridges, &c.
Zuccato, E. de	394	Feb. 1	Copying letters, writings, and delineations.
„ E. de	1115	Mar. 15	Producing fac-simile copies of writings, &c.



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| Carlisle (<i>Public Free Library, Police Office</i>). | Paisley (<i>Government School of Design, Gilmour Street</i>). |
| Cork (<i>Royal Cork Institution, Nelson Place</i>). | Plymouth (<i>Mechanics' Institute, Princess Square</i>). |
| Crewe (<i>Railway Station</i>). | Preston, Lancashire (<i>Dr. Shepherd's Library, the Institution, Avenham</i>). |
| Derby (<i>Free Library and Museum</i>). | Reading (<i>Literary, Scientific, and Mechanics' Institution, London Street</i>). |
| Dorchester (<i>County Museum and Library</i>). | Rochdale (<i>Free Public Library, Town Hall</i>). |
| Dublin (<i>Royal Dublin Society, Kildare Street</i>). | Rotherham (<i>Board of Health Offices, Howard Street</i>). |
| Dundalk (<i>Free Library</i>). | Salford (<i>Royal Museum and Library, Peel Park</i>). |
| Gateshead-on-Tyne (<i>Mechanics' Institute</i>). | Sheffield (<i>Free Library, Surrey Street</i>). |
| Glasgow (<i>Stirling's Library, Miller Street</i>). | Southampton (<i>Hartley Institution</i>). |
| Grimsby, Great (<i>Mechanics' and Literary Institution, Victoria Street</i>). | Stirling (<i>Burgh Library, Town House, Broad Street</i>). |
| Halifax (<i>Town Hall</i>). | Stockport (<i>Central Free Library</i>). |
| Huddersfield (<i>Improvement Commissioners' Offices, South Parade</i>). | Sunderland (<i>Corporation Museum, Athenæum, Fawcett Street</i>). |
| Hull (<i>Mechanics' Institute, George Street</i>). | Wakefield (<i>Mechanics' Institution, Barstow Square</i>). |
| Ipswich (<i>Museum Library, Museum Street</i>). | Warrington (<i>The Museum and Library</i>). |
| Keighley (<i>Mechanics' Institute, North Street</i>). | Wexford (<i>Mechanics' Institute, Crescent Quay</i>). |
| Kidderminster (<i>Public Free Library, Public Buildings, Vicar Street</i>). | Wigan (<i>Corporation Library</i>). |
| Leamington (<i>Free Public Library, Bath Street</i>). | Wolverhampton (<i>Free Library</i>). |
| Leeds (<i>Public Library, Infirmary Buildings</i>). | Wolverton (<i>Railway Station</i>). |
| Leicester (<i>Free Library, Wellington Street</i>). | York (<i>Lower Council Chamber, Guildhall</i>). |

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Small Arms Factory, Enfield.
War Office, Pall Mall.
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Seats of Learning and Societies.

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Trinity College, Dublin.
Queen's College, Galway.
Incorporated Law Society, Chancery Lane, London.

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British Guiana.	ces.
Canada—Library of Parlia-	Jamaica.
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culture, To-	New Brunswick.
ronto.	Newfoundland.
Board of Arts and	New South Wales.
Manufactures,	New Zealand.
Montreal.	Nova Scotia.
Cape of Good Hope.	Prince Edward Island.
Ceylon.	South Australia—Colonial
India—Bengal.	Institute, Adelaide.
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Victoria—Parliamentary Library, Melbourne.
Victoria—Patent Office, Melbourne.
Public Libr Melbourne.

Foreign States.

Argentine Republic—Buenos Ayres.
Austria—Athenæum, Vienna.
Polytechnic University, Vienna.
Belgium—Ministère de l'Intérieur, Brussels.
Musée de l'Industrie, Brussels.
France—Bibliothèque Nationale, Paris.
Conservatoire des Arts et Métiers, Paris.
Germany—Alsace—Société Industrielle, Mulhouse.
Bavaria—Königliche Bibliothek, Munich.
Gotha—Ducal Friedenstein Collection.
Prussia—Königliche Polytechnische Sch
Aix-la-Chapelle.
Gewerbe-Akademie, Berlin.
Königliche Bibliothek, Berlin.
Königliche Polytechnische Sch
Hanover.
Saxony—Polytechnische Schule, Dresden.
Wurtemberg—Bibliothek des Ministeri
Italy—Ufficio delle Privative, Rome. [Statg
Netherlands—Harlem.
Russia—Bibliothèque Impériale, St. Petersburg.
Spain—Madrid.
Sweden—Teknologiska Institutet, Stockholm.
United States—Patent Office, Washington.
Astor Library, New York.
State Library, Albany.
Franklin Institute, Philadelphia.
Free Public Library, Boston.
Library Company, Philadelphia.
Free Public Library, Chicago.
Peabody Institute, Baltimore.
Historical Society, Madison, Wisconsin.
Cornell University, Ithaca, N.Y.
Mercantile Library, St. Louis.
Mechanics' Institute, San Francisco.

Grants of complete series of Abridgments of Specifications have been made to the undermentioned Mechanics', Literary, and Scientific Institutions :—

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Altrincham (<i>Altrincham and Bowdon Literary Institution</i>).	(<i>Free Library and News Room, 66 Green</i>).
Ashburton (<i>Ashburton Library, East Street</i>).	(<i>Graham Street Institution</i>).
Ashby-de-la-Zouch (<i>Mutual Improvement Society</i>).	(<i>Law Students' Society</i>).
Ashton-under-Lyne (<i>Mechanics' Institution</i>).	Bodmin (<i>Literary Institution</i>).
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Bacup (<i>Mechanics' Institution</i>).	(<i>School of Art</i>).
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Basingstoke (<i>Mechanics' Institute and Club</i>).	Braintree (<i>Braintree and Bocking Literary and Mechan</i>
Bath (<i>Athenæum</i>).	<i>Institution</i>).
(<i>City Free Library</i>).	Brampton, near Chesterfield (<i>Local Museum and Liter</i>
(<i>Royal Literary and Scientific Institution</i>).	<i>Institute</i>).
Batley (<i>Mechanics' Institution</i>).	Breage, Cornwall (<i>Institution</i>).
Battle (<i>Young Men's Christian Association</i>).	Bristol (<i>Athenæum</i>).
Belfast (<i>Athenæum</i>).	(<i>Institution</i>).
(<i>Northern Law Club</i>).	(<i>Law Library Society</i>).
(<i>People's Literary Institute</i>).	(<i>Museum and Library, Queen's Road</i>).
Berkhamstead, Great (<i>Mechanics' Institute</i>).	
(<i>Working Men's College</i>).	

- Bromsgrove (*Literary and Mechanics' Institute*).
 Burnley (*Literary Institution*).
 (*Mechanics' Institution*).
 Burslem (*Wedgwood Institute*).
 Bury (*Athenæum*).
 Bury St. Edmund's (*Athenæum*).
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 (*Young Men's Christian Association*).
 Dorchester (*County Museum and Library*).
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 Dukinfield (*Village Library and Reading Room*).
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 (*Watt Institution and School of Art*).
 (*Working Men's Club*).
 Egham (*Literary Institute*).
 Egremont (*Mechanics' Institute*).
 (*Workmen's Institute*).
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 Exmouth (*Reading Room*).
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 Faversham (*Institute*).
 Fowey (*Working Men's Reading Rooms*).
 Frome (*Literary and Scientific Institution*).
 (*Mechanics' Institution*).
 Gainsborough (*Literary, Scientific, and Mechanics' Institute*).
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 Glasgow (*Athenæum*).
 Glasgow (*Central Working Men's Club and Institute*).
 (*City Industrial Museum, Kelvington Park*).
 (*Institution of Engineers in Scotland*).
 (*Mechanics' Institution, Bath Street*).
 (*Philosophical Society*).
 Glastonbury (*Literary Institute*).
 Godmanchester (*Working Men's Reading Room*).
 Gosport (*Gosport and Alverstoke Literary and Scientific Institution*).
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 Guernsey (*Working Men's Association*).
 Guildford (*Working Men's Institution*).
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 Halesworth (*Mechanics' Institute*).
 Halifax (*Literary and Philosophical Society*).
 (*Mechanics' Institute*).
 (*Working Men's College*).
 Halstead (*Literary and Mechanics' Institute*).
 Haslingdon (*Institute*).
 Hastings (*Literary and Scientific Institution*).
 (*Mechanics' Institution*).
 Hawarden (*Literary Institution*).
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 Helston (*Reading Room and Library*).
 Hemel Hempstead (*Mechanics' Institute*).
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 Hertford (*Literary and Scientific Institution*).
 Heywood (*Mechanics' Institute*).
 Hitchin (*Mechanics' Institute*).
 Holbeck (*Mechanics' Institution*).
 Hollingwood (*Working Men's Club*).
 Holt, Norfolk (*Literary Society*).
 Holywell Green (*Mechanics' Institution*).
 Horncastle (*Mechanics' Institution*).
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 Leicester (*Law Society*).
 (*Young Men's Christian Association*).
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 Leith (*Mechanics' Subscription Library*).
 Lewes (*Fitzroy Memorial Library*).
 (*Mechanics' Institute*).
 (*School of Science and Art*).
 Lincoln (*Mechanics' Institute*).
 Liverpool (*Institute*).
 (*Medical Institution*).
 (*Polytechnic Society*).

(Free Public Library, Great Smith Street, Westminster).
 (Holloway Working Men's Club and Institute, Holloway Road).
 (Literary and Scientific Institution, Walworth).
 (London Association of Foremen Engineers and Draughtsmen).
 (London Institution, Finsbury Circus).
 (London Library, St. James).
 (Royal Architectural Museum and School of Art, Tufton Street, Westminster).
 (Royal Institute of British Architects, Conduit Street, Hanover Square).
 (St. James and Soho Working Men's Club, Rupert Street, Soho).
 (South London Working Men's College, Blackfriars Road).
 (Working Men's Club, Brixton Hill).
 (Working Men's Club, St. Mark's, Victoria Docks).
 (Working Men's Club and Institute, Battersea).
 (Working Men's Club and Institute Union, Strand).
 (Working Men's Club, Triangle, Hackney).
 (Working Men's College, Great Ormond Street).
 Longwood (Mechanics' Institution).
 Lowestoft (Library and Reading Room).
 Lye (Institution).
 Lymington (Literary Institute).
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 Maidstone (St. Paul's Literary Institute).
 (Working Men's Club and Institute).
 Maldon, Essex (Literary and Mechanics' Institute).
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 (Law Library).
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 (Owen's College).
 (Portico Library, Mosley Street).
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 Ormskirk (Public Library).
 Oswestry (Institute).
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 Oxford (North Oxford Working Men's Club).
 Patricroft (Mechanics' Institution).
 Pembroke Dock (Mechanics' Institute).
 Pendleton (Mechanics' Institution).
 Penzance (Institute).
 (Penzance Library).
 (Working Men's Association).
 Perth (Mechanics' Library, High Street).
 Peterborough (Mechanics' Institution).
 Plymouth (Working Men's Institute).
 Pontypool (Literary Institute).
 Poole (Literary and Scientific Institution).
 (Mechanics' Institute).
 Port Glasgow (Public Library).
 Portsea Island (Young Men's Christian Association).
 Preston (Institution for the Diffusion of Knowledge).
 Redruth (Redruth Institution).
 Reigate (Mechanics' Institution).
 Richmond (Working Men's College).
 Rotherham (Rotherham and Masbro' Lite Mechanics' Institute).
 Royston (Institute).
 Rusholme (Public Hall and Library).
 Ryde, Isle of Wight (Philosophical and Scientific Institution).
 (Young Men's Christian Association and Literary Institute).
 Saffron Walden (Literary and Scientific Institution).
 St. Just (Institution).
 St. Leonards (Mechanics' Institution).
 (Working Men's Club).
 Salford (Working Men's College).
 Salisbury (Literary and Scientific Institution).
 Saltaire (Literary Institute).
 Scarborough (Mechanics' and Literary Institution).
 Selby (Mechanics' Institute).
 Sevenoaks (Literary and Scientific Institution).
 Shaftesbury (Literary Institution).
 Sheerness (Literary Institute).
 Sheffield (Branch Free Library).
 (Brightside Branch Library).

- Southport (*Athenæum*).
 South Shields (*Public Free Library*).
 Southwell (*Literary Institution*).
 Spalding (*Christian Young Men's Association*).
 (*Mechanics' Institute*).
 Stafford (*Mechanics' Institute*).
 Staines (*Mechanics' Institute*).
 Stalybridge, Cheshire (*Mechanics' Institution*).
 Stamford (*Institution*).
 Stourbridge (*Associated Institute*).
 (*Church of England Association*).
 (*Iron Works Reading Room and Library*).
 (*Mechanics' Institution*).
 (*Working Men's Institute*).
 Stowmarket (*Literary Institution*).
 Stratford (*Working Men's Hall*).
 Sudbury, Suffolk (*Literary and Mechanics' Institute*).
 Surbiton (*Reading Room and Literary Institution*).
 Swansea (*Royal Institution of South Wales*).
 (*South Wales Institute of Engineers*).
 (*Working Man's Institute*).
 Tavistock (*Mechanics' Institute*).
 (*Public Library*).
 Thornton, near Bradford (*Mechanics' Institute*).
 Todmorden (*Mechanics' Institution*).
 Truro (*Cornwall County Library*).
 (*Institution*).
 (*Royal Institution of Cornwall*).
 Tunbridge (*Literary and Scientific Institution*).
 (*Mechanics' Institute*).
 Tunbridge Wells (*Mechanics' Institution*).
 (*Society of Literature and Science*).
 Turton, near Bolton (*Chapel Town Institute*).
 Tynemouth (*Free Public Library*).
 Ulverston (*Temperance Hall*).
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 Room Institute).
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 Wallingford (*Free Library and Literary Institute*).
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 Ware (*Institute*).
 Warminster (*Athenæum*).
 Watford (*Literary Institution*).
 (*Public Library*).
 Wellingborough (*Working Men's Club*).
 Wellington (*Young Men's Christian Association*).
 Wells, Somerset (*Young Men's Society*).
 West Bromwich (*Free Library*).
 Whaleybridge (*Mechanics' Institute*).
 Whitby (*Institute*).
 (*Museum*).
 (*Subscription Library*).
 Whitehaven (*Mechanics' Institute*).
 (*Working Men's Reading Room*).
 Whitstable (*Institute*).
 Wilton (*Literary Institution*).
 Winchester (*Mechanics' Institution*).
 (*Training College*).
 Winsford (*Town Hall Reading Room*).
 Wirksworth (*Mechanics' Institution*).
 Wisbeach (*Mechanics' Institute*).
 Witham (*Literary Institution*).
 Witney (*Athenæum*).
 Wolverhampton (*Law Library*).
 (*Library*).
 Wolverton (*Institute*).
 Woodbridge (*Literary and Mechanics' Institute*).
 Worcester (*Railway Literary Institution*).
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 hall Street).
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 Coalbrookdale (*Literary and Scientific Institution*).
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 Dublin (*Dublin Library, D'Olier Street*).
 Dundee (*Association of Watchmakers and Jewellers*).
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 (*House of Commons*).
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 Street).
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British Colonies and Foreign States.

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Germany—Imperial and Provincial Library of the University, Strasburg.
Imperial Statistical Office, Berlin.
Polytechnic School, Carlsruhe, Baden.
Italy—Communal Library, Palermo.
Netherlands—Library of the Polytechnic School, Delft.
New Zealand—Athenæum and Mechanics' Institute, Dunedin.
Russia—Imperial Technological Institute, St. Petersburg.
Turkey—Literary and Scientific Institute, Smyrna.

Victoria—School of Mines, Ballarat.
United States—American Academy of Arts and Sciences, Boston.
American Institute, New York.
American Society of Civil Engineers, New York.
Industrial University, Champaign, Illinois.
Mechanics' Institute, San Francisco.
Mercantile Library Association, Pittsburgh, Pennsylvania.
Odd Fellows' Library Association, San Francisco.
Smithsonian Institute, Washington.
Wabash College, Crawfordsville, Indiana.
Young Men's Christian Association, Scranton, Pennsylvania.

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ABRIDGMENTS OF SPECIFICATIONS.

The following is a KEY to the classes already published. The numbers refer to the List of Abridgments on pages 2 and 3, where the full titles, prices, &c., are given :-

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|--|---|---|---|
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 Zinc, oxides, &c. *See* Acids, &c., 40.

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